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2. Finely Ground
3. Snow (Neige Crystals).

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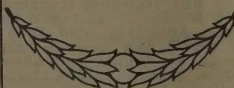
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"The Fruit World," Box 1944
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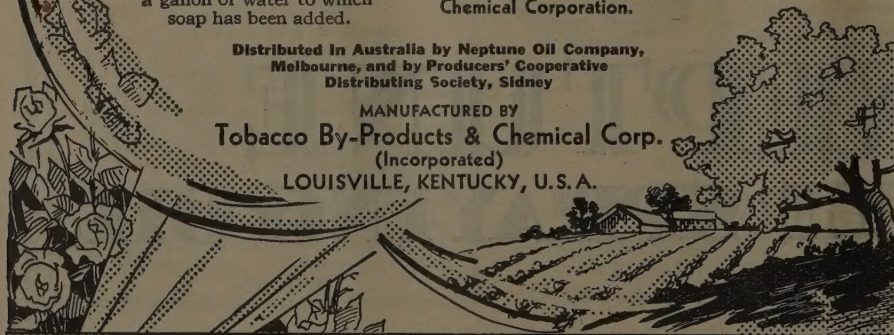
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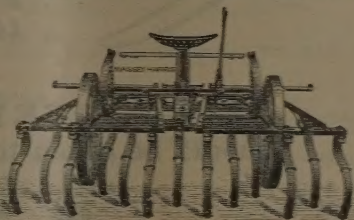
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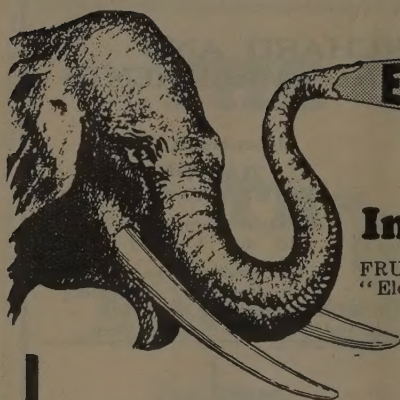
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Ornamental trees, flowering shrubs, conifers, fruit trees, etc., grown under hardy conditions, may be obtained from Messrs. C. A. Nobelius & Sons Pty. Ltd., Gembrook Nurseries, Emerald, Vic. Specimen plants can also be inspected at the Bramleigh Gardens, Mt. Dandenong-road, Croydon. Write for catalogue.

Editorial Chats



SELLING FRUIT BY NUMBER.

Should be Adopted Instead of Selling by Weight.

Reform Sought in Australia, Canada and England.

THE SELLING OF APPLES (also Pears and Quinces) by number instead of by weight is already adopted in several of the Australian States. In Victoria, however, although Bananas, Oranges, Passion Fruit are sold by number, other hard fruits, including Apples, Pears and Quinces, are sold by weight. To turn the scales, the shopkeeper has frequently to provide considerable overweight and in the aggregate this counts up considerably, especially in regard to large Apples. The large Apples suffer in price comparison.

The Victorian Fruit Marketing Association recently carried a resolution in favor of selling Apples locally by number instead of by weight, and the principle was approved by the Retail Fruiterers' Association. The proposal also has the goodwill of the Horticultural Division of the Department of Agriculture.

It is to be hoped that fruitgrowers in their own interests will speedily undertake a campaign to bring about this long overdue reform.

It is interesting to note what has been done in this connection in Canada.

A competition was arranged by the Canadian Trade Publicity Office, a branch of the Department of Trade and Commerce, Ottawa, and the public was asked to estimate the losses caused by peeling and coring large and small Apples. The weight decided upon was 89 lb. Apples size 216 to the case, and 89 lb. size 125. The actual work of coring and peeling was done in London. The Apples in both cases were quartered, cored and peeled and carefully weighed before and after, and in both cases the weighings were done by competent people and then rechecked by a third party. The results were as follows:—

Regarding the small Apples, the 89 lb. resolved themselves thus:—		
Edible Apple	34 lb. 6	3-5 oz.
Cores and peelings	53 lb. 10	2-5 oz.
Loss by evaporation		15 oz.
	89 lb.	

With the large Apples the result was:—

Edible Apples	63 lb. 6	oz.
Cores and peelings	25 lb. 4	oz.
Loss by evaporation		6 oz.
	89 lb.	

The result was a great surprise to the organisers, and proved that large Apples would show an economy by comparison with the small. Another feature is that the labor of coring and peeling large Apples is considerably less than in the case of the small. The large Apples really yield double the amount of edible fruit, and this should convince the economical housewife to purchase large fruit.

The Canadian Trade Publicity Office in London has received reports that during the Apple season in Canada, this system has been adopted with success, and this, combined with the experiments above mentioned, should bring about the system of selling by number instead of by weight in Great Britain as well as in all States of the Commonwealth.

IMPORTANCE OF ADVERTISING FRUIT.

THE ADVERTISING OF FRESH FRUIT and fruit products has been a prominent feature in America for some years past, and great success has attended the efforts of those who have so wisely invested portion of their funds in advertising.

Apples, however, have not been advertised so freely as other fruits, consequently, growers are now giving close attention to this subject.

The expenditure in advertising in magazines by various Fruitgrowers' Associations in America for the ten years ended 1931 are given as follows:—California Fruitgrowers' Exchange (citrus), £749,413; California Packing Corporation, £1,359,458; California Walnut Growers' Association, £232,610; Hawaiian Pineapple (two) Associations, £774,855.

An educational campaign to induce the fruit-eating habit in Australia would be money well invested.

BLACK SPOT FORECASTS.

SPEAKING on the subject of scientific investigation at the recent meeting of the Thrips Investigation League, Mr. Geoffrey W. Brown, President of the Victorian Fruit Marketing Association, said he was in touch with Mr. D. B. Adam, B.Ag.Sc. (Government Plant Pathologist) regarding the possibility of establishing a system of forecasting black spot infestation on the same lines as has been successfully adopted in France and other parts of the world. The idea was that growers in the various districts should collect dead leaves from under their trees and forward same from time to time to the Plant Research Laboratory for scientific observation. Records should also be kept of wet and dry bulb readings. The spores of the black spot fungus were released according to certain weather conditions and by close observation as suggested it would be possible to determine the correct time for fungicidal sprays.

Information as to the best time for spraying could be published in the press and broadcast by wireless.

Mr. D. Grant, Drouin, warmly supported the proposal, stating that the time for putting on the spray was all important.

It is hoped that if these arrangements can be carried out, growers will secure greater efficiency at less cost.

CAN YOU EMPLOY A BOY?

A movement has been inaugurated with the object of finding employment for boys and to encourage them to continue their technical training and other studies. The movement is an entirely honorary organisation and was established in Melbourne in April, 1931. On the Executive Committee are representatives of commercial and industrial interests, and it has the support of the Education Department, Department of Commerce, the Chamber of Manufactures, and a large number of satisfied employers. The movement feels that there is much to be done for the unemployed boy. Can you help too? It will pay you when you have your next vacancy to ring Central 3246,

Melbourne, for one of the 3,000 boys now unemployed. This service costs you nothing. The movement is free to all, and is open to all boys between the ages of 14 and 19. The sole condition of a lad's registering is "wanting work."

The movement keeps records of the school and family record of each boy, notes his physique and personality, and after considering his references as to character classifies him for which he appears most suitable. It is hoped that any of our readers who require a boy for any class of work will remember the movement and get in touch with the Hon. Secretary, Mr. G. R. Giles, whose address is Kurrajong House, 177 Collins-street, Melbourne.

FIRST PULLAR'S CLING PEACH TREE.

Destroyed by Wind.

FORTY-ONE YEARS AGO the first Pullar's Cling Peach tree was planted in an orchard near the home of Mr. F. Pullar, of Ardmona. This tree, from which all the Pullar's Cling trees have arisen, has now been destroyed. It was a seedling on which was budded the Hale's Early variety. However, the bud of the Hale's Early died and the seedling grew, being carefully watched by the late Mr. Phillip Pullar, who sent the first fruit to the Australasian Jam Company to be treated. The results were so good that Mr. Pullar budded a block of 10 acres of trees from this tree, this block still being in existence and bearing well. There were 267,000 Pullar's Cling Peach trees in Victoria in 1926, all of which came from this tree, the total number of Peach trees in the State then being 1,100,000. This has been a great thing for fruitgrowers, thousands of acres having been planted from it in the Goulburn Valley.

The original tree was recently blown over by wind and broken at the butt. Two suckers appeared, and these Mr Pullar hoped to preserve, but in error the tree was taken out and destroyed.

ENTOMOLOGICAL CENTENARY IN LONDON.

One hundred years ago, in May, 1833, at the Thatched House Tavern, in St. James's-street, London, the Entomological Society of London was founded.

At the Society's present house at 41 Queen's Gate, South Kensington, overlooking the Natural History Museum, the Society is preparing to welcome many distinguished visitors from overseas for centenary celebrations on May 3 and 4.

The Society to-day numbers nearly 700 Fellows, including many entomologists of note from abroad.

CENTENARY CELEBRATIONS IN VICTORIA.

Preparations are being made for a huge floral display in October, 1934, at Melbourne during the Centenary celebrations of the State, which will extend for over six months, and possibly more. The Victorian Centenary Horticultural Council has been formed, with Alderman F. Stapley as Chairman, Sir Frank Clarke, M.L.C., Vice-Chairman, Mr. G. R. Gould, Secretary. Application has been made for the use of the Fitzroy Gardens. Should permission be granted, marquees will be erected to house the numerous exhibits. It is hoped that a prominent place will be given to fruit exhibits. The Committee will bear in mind the possibility of a second huge horticultural event in the autumn of 1935.

THRIPS INVESTIGATION LEAGUE.

Experiments with Repellants.

A MEETING of the Executive of the Thrips Investigation League was held at Melbourne on April 12, 1933, Mr. J. W. Bailey presiding. There were also present:—Dr. Davidson, Professor Wadham, Messrs. H. G. Andrewartha (Entomologist), G. W. Brown, W. P. Hutchinson, D. Grant, Jas. Allan (National Rose Society), and the Secretary, R. E. Boardman. Apologies were received from Dr. Rivett, Messrs. H. M. McLean, J. H. Ely, A. S. Harrison, and C. Parnham.

Dr. Davidson stated that the effects of humidity, temperature, soil moisture, etc., on the life history of the insects were being studied. Tests with sprays and dusts were being conducted in the field and checked in the laboratory. In a plague year it was impossible to kill the myriads of thrips. Experiments were being conducted to discover a suitable repellent for incorporating in spraying and dusting materials. The repellent was required to keep the insects away for two or three days in the peak period. For this work the assistance of a chemist was required. Field and laboratory work would be carried out in Victoria and South Australia. Daily records had been kept of the number of thrips present in a blossom. Dr. Davidson submitted graphs which revealed the enormous rise in the thrips population in the spring. Information was necessary as to the extent in which weeds assisted breeding over a large area. The co-operation of growers was desired and a postal service would be established by which means growers could send blossoms containing thrips every week. Continuing, Dr. Davidson stated that Mr. H. G. Andrewartha had had considerable experience in the investigation of thrips in Western Australia and would organise an investigational programme in Victoria in a concentrated manner. It was unwise to attempt to cover too much territory, as the energy would be dissipated. Experiments in dusting and spraying would be conducted on blocks of 50 trees.

The Chairman tendered a welcome to Mr. Andrewartha and expressed pleasure at his appointment and trusted success would follow. He stated that after all cultural methods had been attended to, thrips were liable to create the weak link in the chain. Science had done much for the man on the land and growers now looked to the scientists to effectively cope with the thrips menace. Mr. Andrewartha suitably responded.

A letter was read from Dr. Rivett, Council for Scientific and Industrial Research, making several recommendations, which were adopted as follows:—(1) That a chemist be appointed on a monthly basis at the discretion of Dr. Davidson. (2) That Prof. Wadham be invited to become the official representative of the League in Victoria. (3) That Miss H. Steele be appointed for part time duties at a salary of £100 per annum.

At the instance of Mr. Allan, a vote of thanks was conveyed to the Chairman.

Funds are still required to carry out the three-year investigational research programme. Contributions would be gladly received from growers and all interested in the industry.

Do the duty that lies nearest thee, which thou knowest to be a duty! The second duty will already become clearer.—Carlyle.

The world is too much with us,
Getting and spending we lay waste our powers.
Little we see in nature that is ours.

Wordsworth.

VICTORIAN GOVERNMENT BIOLOGIST.

General regret has been expressed at the proposed retirement by effluxion of time of Mr. C. French, Junr., Government Biologist. Fruitgrowers and horticulturists have expressed keen appreciation of the services of Mr. French, particularly in his work relating to Entomology.

It is understood that Horticultural Societies and Fruitgrowers' Associations are approaching the Minister for Agriculture for an extension of time for Mr. French's services, seeing that he is in full vigor and has a lifetime of experience behind him.

PERSONAL.

We were pleased to see the Hon. L. M. Shoobridge, M.L.C., at the Garden Week display, Melbourne, early in April. Despite his 82 years of age, Mr. Shoobridge is as active as ever and takes a keen interest in all matters relating to tree planting. During Garden Week, Mr. Shoobridge visited public parks and gardens as well as gardens of leading citizens, observing trees and shrubs which could beautify the Tasmanian landscape.

Californian Director of Agriculture.

Mr. A. A. Brock, who was Agricultural Commissioner in the Orange County, has been appointed Director of Agriculture for California in place of Mr. Dudley Moulton. It will be remembered that Mr. Moulton was appointed Director of Agriculture on the retirement of Mr. George Hecke.

Captain A. W. Pearse, Sydney representative of the Port of London Authority, sailed for London by the s.s. "Orama" on April 18.

Mr. R. T. M. Pescott, M.Ag.Sc., Victorian Government Entomologist, was married on April 15 to Miss Gwen Walduck, daughter of Mr. and Mrs. Walduck, of Malvern, Vic. Mr. Pescott is the son of Mrs. Pescott and the late Joseph R. Pescott, and a nephew of Mr. E. E. Pescott, Pomologist, Victorian Department of Agriculture.

Mr. S. Fish, M.Ag.Sc., Assistant Plant Pathologist, Vic. Department of Agriculture, visited Sydney at the end of March in connection with the transport of Peaches from the Goulburn Valley. The object of the visit was to observe the conditions of the transport of Peaches by rail—pre-cooling, transport by ice truck and the subsequent development of brown rot on arrival.

It is hoped that as a result of the observations, improvements will be made in the transport of Peaches to interstate markets.

NATURE.

"Nature flings treasures abroad, puffs them with open lips along on every breeze, piles up lavish layers of them in the free open air, packs countless numbers together in the needles of a fir tree. Prodigality and superfluity are stamped on everything she does. The ear of wheat returns a hundredfold the grain from which it grew. The surface of the earth offers to us far more than we can consume—the grains, the seeds, the fruits, the animals, the abounding products are beyond the power of all the human race to devour. They can, too, be multiplied a thousandfold. There is no natural lack. Whenever there is lack among us it is from artificial cause, which intelligence should remove."—Richard Jeffries (1848-1887).

SYNTHETIC "FRUIT" ESSENCES.

"Use More Fruit," says Grocers' Employees' Union.

According to a recent statement by Mr. F. J. Riley, Secretary of the Manufacturing Grocers' Employees' Union (Victoria), most culinary essences, cordials, jelly crystals and other preparations are made wholly or in part from synthetic or artificial substances in imitation of natural fruit or vegetable flavors, when tons of fruit are allowed to rot in glut seasons, owing to no provision being made for their use, yet the public have foisted on them, synthetic fruits that are not fruit at all. Why isn't this surplus fruit used for flavoring instead of the synthetic preparations? asks Mr. Riley. It would be an outlet for the large quantities that are wasted and would help the growers. The berry fruits could well be used for essences and for concentrating and exporting overseas. Thousands of bushels of Lemons are not marketed every year owing to there being no market for them. These could be used for the manufacture of essences, jelly crystals, cordials, etc., and would be more palatable and better for the health of the community than the so-called "fruit essences" now on the market.

RELIEF OF PRIMARY PRODUCERS.

Representatives of the Victorian Fruit Marketing Association attended a conference of primary producers in Melbourne on April 14, convened by the United Country Party, to consider schemes for the relief of primary producers. Mr. A. E. Hocking presided. Mr. Mackrell, M.L.A., advocated a voluntary plan for the extension of mortgages, the writing down of capital and reduction of interest. A sum of £5,000,000 to £7,000,000 could be borrowed to enable some suitable authority to grant credit facilities to distressed farmers, repayment over 31½ years.

The manager of the Primary Producers' Restoration League, Mr. A. S. Rodgers, said no voluntary plan of relief could succeed. The compulsory writing down of debts similar to the National Conversion Loan was necessary. This would necessitate both State and Federal legislation.

Mr. J. McEwen (Stanhope) brought forward a proposal for giving distressed farmers relief under the existing legislation. Protection was necessary from creditors for five years. Assets could be administered by a Farmers' Relief Board, interest to be paid to creditors. The five years' period would give security of tenure when the position was reviewed.

Mr. E. M. Tobin (Ouyen) suggested legislation giving distressed farmers ten years in which to rehabilitate themselves.

A comprehensive resolution embodying the principle of giving farmers security of tenure was carried for submission to the Premier.

LAND SETTLEMENT IN VICTORIA.

The report by the Royal Commission on Migrant Land Settlement in Victoria contains a severe criticism of the land settlement methods of the Victorian and Federal Governments.

Of the 318 cases which came under review, the Commission found that 129 settlers lacked efficient supervision and 127 were described as having insufficient training. Members of the Commission were Chief Judge Dethridge, Messrs. Clive McPherson and W. E. B. Macleod. Settlers are seeking compensation to the extent of £750,000.

Gas Storage of Fruit.

Apples Kept for 12 Months in England

The Method Described

A correspondent from Queensland has written asking for additional information regarding the gas storage of fruit.

The Commonwealth Council for Scientific and Industrial Research has courteously made available the following details—an extract from the "British Science Guild"—the Norman Lockyer Lecture, 1932, thus:—

"Industrial Research and the Nation's Balance Sheet,"

By Sir Frank E. Smith, K.C.B., C.B.E., LL.D., D.Sc.,
Sec. R.S.

"The biological study of the Apple has led to a much more valuable discovery than that of proper ventilation during refrigeration. While it is possible by appropriate cultivation to do something to increase the ability of the home-grown Apple to satisfactorily withstand cold storage for long periods, an alternative method of storage has been discovered, which will keep certain home-grown Apples for more than 12 months.

"It has already been stated that an excess of carbon dioxide causes 'brown heart' in the Apple, but the discovery has been made that if the amount of carbon dioxide present is carefully regulated at a predetermined value the gas does not suffocate but preserves the fruit. The carbon dioxide exerts a chemical back pressure and restrains escape of carbon dioxide from the Apple. The result is that the combustion of the Apple proceeds more slowly and loss of weight with time is appreciably reduced.

"This discovery has led to the development of a completely new method of storage, known as gas storage. It is a combination of low temperature preservation and a controlled atmosphere of carbon dioxide. It has been applied with great success in the case of Apples, and it is probable that it can be successfully applied to other fruits. This method is particularly applicable to home-grown Apples, since the storage temperature used is not so low as in cold storage without gas.

"In the laboratory elaborate and carefully controlled experiments are necessary to determine the optimum conditions, but the commercial application of the method is very simple.

"All that is required is a suitable building which can be rendered gastight by lining it with sheet tin and packing the joints with vaseline. The Apples, by breathing produce the necessary amount of carbon dioxide, and when they have done this the amount is prevented from increasing by letting in the necessary quantity of fresh air. A cooling plant is also required to reduce the temperature to the necessary amount. It is estimated that it costs about £40 to transform an ordinary cold storage chamber into a gas store, while a building capable of holding 500 tons of Apples may be completely equipped as a gas store for about £1,000. Several growers in Kent have adopted the gas storage method for Bramley's Seedlings, and the gas-storage accommodation in this country has doubled in the last year. It now amounts to some 1,750 tons, while another 1,000 tons is known to be planned; in a few years the quantity is likely to be ten times as large.

"It is estimated that recent developments in cold storage and gas storage of home-grown Apples, in all of

which the experience and advice of the Food Research Station have been freely drawn upon, have increased the growers' returns by £100,000 per annum."

This subject is being followed up in Australia by the C.S.I.R., and investigations are being made by Dr. S. A. Trout in co-operation with State Departments of Agriculture. Further information will be published as soon as it is available.

STORAGE LIFE DOUBLED.

Enlarged Possibilities for Storing Peaches and Delicate Fruits.

Mr. G. B. Tindale, B.Ag.Sc., Cool Storage Research Officer, Victorian Department of Agriculture, advises as follows:—

THE CARBON DIOXIDE method of storing Apples was pioneered at the Low Temperature Research Station, England, and has now been taken up commercially in that country, large quantities of home-grown Apples being so stored.

Briefly, the process may be described as follows:— Apples when picked continue to respire, that is, take in oxygen and give off an equivalent amount of carbon dioxide. Should ventilation be lacking the carbon dioxide will accumulate around the Apples while the oxygen content will diminish to a corresponding extent.

When the English authorities were studying the brown heart problem, they found that an accumulation of 15-25 per cent. carbon dioxide with the corresponding oxygen deficiency caused brown heart. However, it was noticed that an accumulation of CO₂ up to 10 per cent. had the effect of prolonging the life of the Apple. As a result of these experiments, it was decided to store Apples in gastight chambers, allow the carbon dioxide to accumulate to 10 per cent. (by which time the oxygen content of the chamber would have diminished correspondingly from the normal atmospheric amount of 21 per cent. to 11 per cent.), and by a controlled ventilation with normal air (21 per cent. oxygen less than 1 per cent. CO₂) hold the atmosphere at a uniform composition. By so doing, it was found that the storage life could be approximately doubled.

It should be stressed that the gas storage method does not replace cold storage, but is supplementary to it because the effect of temperature is the same for either method, that is, a rise in temperature will hasten ripening and so shorten the storage life.

So successful have been the results of combining gas storage with cold storage, that the English Bramley can be stored right through one season to the next. In the immediate future, the method will probably affect our growers adversely by limiting the English demands for imported Apples, but on the other hand it will probably be of great value to our growers in opening up a method for exporting our most delicate fruits. Dessert Peaches, for instance, have a maximum cold storage life of approximately five weeks which is insufficient time to allow of their being exported successfully. We have evidence,

however, that by supplementing cold storage with gas storage, the life may be extended up to eight or nine weeks.

Before the method could be applied on board ship considerable expense would be involved in adapting present holds, etc., but on the other hand the method is relatively simple, i.e., a matter of controlled ventilation compared with the complicated process of refrigeration.

COOL STORAGE NOTES.

"How to Get the Best Out of Your Compressor."

MANAGERS who have, within recent years, had new compressors installed at their factories, will appreciate their efficiency and economy in operating time and use of ammonia. Reasonable care and periodical overhauls by experts will maintain this state of affairs for many years, as the average ammonia compressor has a very long life. While experience has revealed that compressors will still operate when the working parts are in a really deplorable condition, the power to drive and time of operation becomes abnormal, costing far more than reasonable replacements and repairs. The following suggestions are given by R. Werner & Co. Pty. Ltd. for guidance:—

Valves.—Remove all valves at least once a year and grind to seats with carborundum paste, obtainable from any garage. File down or have machined off any parts of seats, overlapping and replace any weak or broken springs. Worn spindles and guides cause sluggish action and reduce compressor capacity and can only be properly serviced by experienced workmen.

Piston Rods and Glands.—These are the weak links in every compressor, as the leak proof gland has yet to be invented. Of course, some glands when in perfect order leak but little, but the annual ammonia bill proves that they do leak; however, this fault may be reduced to a minimum by having the piston rod periodically re-ground and all glands and neck bushes re-metalled. Most rods will stand at least two re-grinds, but when the limits of the standard packing size have been reached, nothing remains but a new rod of standard size with neck rings and gland reconditioned to suit.

The choice of packing will be the subject of a later memoranda, but for the present it is safe to take the compressor maker's recommendation.

Attention to piston rod is more important than most engineers realise, as the evil effect of worn rod and parts, especially in horizontal compressors, goes further than the leakage of ammonia, as part of the weight of the piston is supported on the gland and neck ring, consequently it is seen that a worn rod leads to a worn cylinder, piston and rings, with the resultant falling off in pumping capacity.

Cylinder Parts.—These parts, with ordinary care, last many years, but of course eventually wear oval and tapered, throwing more weight on the piston rod and parts, causing rapid wear on the underside of horizontal machines especially. Re-boring of cylinder with new piston and rings is then necessary, restoring the compressor to new efficiency once more.

Bearings.—Commonsense adjustment and lubrication of all bearings is the usual province of most factory engineers and with a little attention these parts will last a long time; care, however, should be taken after any adjustment to check clearances in compressor cylinder by means of removing valves and turning compressor by

hand, with a piece of lead wire in cylinder so as to be squeezed to indicate the amount of clearance, allowing a little less at the gland end of the horizontal double-acting machines.

When knocks cannot be eliminated, the journals are probably oval and must be re-ground to a true circle.

Stop Valve Spindles.—Suction stop valve spindles, run the piston rod a good second for ammonia loss, and should be kept well oiled and packed. When the spanner has to be used opening and shutting, it is time for a new spindle.

General.—Keep the compressor clean and well oiled with proper grades of oil, and don't try to get an extra month or so out of those worn valves and rods. Loss of ammonia and a possible breakdown is far more costly than timely repairs.

FRUIT COOL STORES' CONFERENCE.

The Orchardists and Fruit Cool Stores Association of Victoria will hold its annual conference at Mornington (Plaza Theatre), on May 25 and 26. The conference will be opened by the Shire President of Mornington, Cr. D. Walsh. Addresses will be given during the conference by Senator Elliott ("Empire Marketing"), Mr. W. Ranger, manager C.O.D., Queensland; Mr. W. J. Williams, Markets Superintendent, Sydney; Mr. E. H. Hatfield ("Weather and Fruiting"); Mr. G. B. Tindale, Dept. of Agriculture.

Other questions that will be dealt with are:—What can be done to lengthen the life of present cool store buildings? What is the best material and insulation for present-day construction of stores? (Mr. S. C. Brittingham, late Chief Architect Public Works). What is the best method of preserving refrigeration coils? (Mr. R. Werner). What is the best method of treating cool store chambers for fungus control? (Mr. E. H. Hatfield). Automatic control of temperatures? (Mr. Wilkinson, Electricity Commission). General business is to be brought forward by affiliated stores.

Supplies of fruit are being steadily received at the Harcourt Cool Stores, which has a capacity for 80,000 cases.

"BLUE BELL" SPRAYS.

Owing to a typographical error, the name of the H. Jones & Co. Ltd., Charles-street, Launceston, who are agents for "Blue Bell" sprays, was omitted from the advertisement of Blyth Chemicals Ltd., which appeared in the "Fruit World Annual." In addition to H. Jones & Co. Ltd., other agents in Tasmania for this firm's sprays are Messrs. W. D. Peacock & Co. Ltd., Hobart, and F. H. Stephens Ltd., 41 St. John-street, Launceston.

Classified Advertisements.

Experienced, Conscientious ORCHARD HAND, married, take low wage decent permanent job anywhere; three years last place. Excellent personal references. Capable full responsibility.—Boulter, Pakenham Upper.

GRAPE VINES, own roots, well grown, any quantity, many varieties. Clean certificate from Dept. of Agriculture.—Weare's Nurseries, Griffith, N.S.W.

Cultivation of Olives.

An Industry Which Should be Developed in Australia.

THERE ARE WONDERFUL OPPORTUNITIES in Australia of growing the finest Olives in the world. Last year olive oil to the value of £30,000 was imported into the Commonwealth from foreign countries. The crop is mainly produced in the countries bordering on the Mediterranean. Millions of trees are grown in California.

The most common methods of propagating Olives is by tip cuttings of the current year's wood, four to six inches long. Remove all but a leaf or two and root the cuttings in sharp sand. They are then set in nursery rows for one, two or three years, where they are cultivated and fertilised well.

The Mission variety is the oldest and most common in Californian orchards; smaller varieties such as Chemlali and Redding are also propagated, but chiefly as stock for orchard grafting. Sevillane is a large-fruited variety used for pickling. The Queen and Mazanilla are improved varieties and the best commercial Olives in cultivation. Olive orchards are set at varying distances between the trees, fifteen, twenty, twenty-four or thirty feet are found in California. In some countries Olives are grown as border trees along fences, roads, etc.

Thorough cultivation should be given the orchard each year until time to sow a winter cover crop. The green manure from the cover crop is ploughed under each spring and other fertility added if needed, particularly while the trees are young. Orchards that are irrigated are cultivated after each watering. Pruning must be done each year. At first remove the lower branches to make a free trunk of about 30 inches. The head limbs should be cut back every year. Thin out one-third of the small limbs from the body of the tree. The fruits are improved by thorough pruning. It also aids in control of the Olive fly and scale insects. Olive-knot disease is also controlled by cutting away the affected parts.

The young Olive bears its fruit at two years old; at eight years it pays the expense of cultivation; after that period in good years, the produce is a sure source of revenue to the grower.

Besides its use for the production of oil, the unripe fruit is used as a pickle. For this purpose they are steeped in an alkaline solution to extract a part of the bitter flavor. They are then washed in pure water, and afterwards preserved in salt and water to which fennel, or some aromatic, is sometimes added. Olive branches have for ages been regarded as emblems of peace and plenty.

In many places about Adelaide the tree has run wild, and unemployed have been able to make something in gathering and selling the fruit to the manufacturers of olive oil. Though grown plentifully, there is not enough fruit marketed to supply the manufacturers with all they want, and a good deal of oil has to be imported from Italy and the South European countries. If people realised the great virtues in the oil of the Olive there would be even a greater demand for it than there is at present.

Those portions of the State proved thus far to give the best results to the Olive grower are stated by Mr. G. Quinn, Chief Horticultural Instructor, to be situated in districts where the annual rainfall ranges from 17 in. to 28 in., most of which falls during the cooler season occurring between April and October. The climatic conditions prevailing in these areas may be roughly divided into a wet and dry season, the temperature ranging at night

from as low as 26 deg. Fah. during the wet cool period, to as high as 114 deg. in the shade during some days in the dry, hot season. These extremes, however, only occur at rare intervals. The soils found most suitable to the Olive have been full bodied clay loams overlaying a calcareous substratum. And it may be claimed that the Olive tree gives the best results in soils freely supplied with lime. From trees growing in moderately heavy deep clayish rather than loose sandy loams overlying limestone rubble, the best oil is produced.

In the irrigation areas along the valley of the River Murray, where the average annual rainfall is seldom over 10 in., the summer temperatures being very high, and the winter records of cold often falling below the freezing point at night, the Olive tree, assisted by irrigation, thrives wonderfully well both in the heavy adhesive loams and sandy soils alike. Although the average standard is good, it is doubtful if the delicate qualities which distinguish the higher grades of oil are produced under these conditions.

TOBACCO CULTURE.

The newly formed Goulburn Valley District Council of Tobacco Growers met recently in the Numurkah Shire Hall, growers from Nathalia, Shepparton, Cobram and Myrtleford being present. Meetings will be held at Numurkah once a quarter, and will form a link between the local Association and the Victorian Association. Mr. V. R. McNab was appointed President, with Mr. Scott, of Cobram, as Vice-President, and Mr. A. T. B. Goyen, Shepparton, Secretary. This was the first meeting of the newly-formed Council, and much attention was given to organisation and general matters.

The following important resolution was passed:—"That this meeting of tobacco growers, representing every grower in the Goulburn Valley, strongly supports the action of the Victorian Tobacco Growers' Association in applying for a reduction of the excise duty on Australian leaf, and points out that it is necessary to take such steps to increase the consumption of our own product, and to safeguard the sale of this season's crop." This was conveyed to the Parliamentary representatives of the district.

ELECTRICAL ENERGY IN FRUIT.

It is reported that an American chemist has perfected an apparatus to test the electrical energy in fruit. The instrument in this way registers acidity, not only in fruit, but in other food, and its commercial value should be considerable.

The discovery was made by chance when the chemist, using a sensitive current meter, stuck its prongs into an Apple. It was when the meter began to register current that the discovery was made.

He'd Eaten Too Much Fruit.

"Your ticket," said the conductor, to the slightly befuddled passenger, "is for Harcourt, and this train is on the Mildura line."

"Goodn'ss grashush!" said the passenger, "doeshn't th' eng'neer know he'sh on the wrong line?"

NEW SOUTH WALES.

N.S.W. FRUITGROWERS' FEDERATION.

A MEETING of the Board of the Fruitgrowers' Federation of N.S.W. was held at Sydney, on April 13. There were present: General J. Heane (in the chair), Messrs. H. G. Such (Griffith), F. D. Innam (Leeton), T. A. Tester (Young), A. E. Herring (Batlow), A. U. Tonking (Orange), H. G. Edgell (Bathurst), P. C. Best (Dural), F. B. Mackenzie (Kurrajong), A. S. Brown (Ourimbah), W. J. Black (Mangrove Mountain), W. W. Challis (Kentucky), A. J. Taylor (Singleton), H. L. Anthony (Murwillumbah), L. T. Pearce (Market Representative), and E. E. Herrod (Secretary).

Railway Fruit Sales.—The Secretary submitted a statement showing the quantities of fruits purchased by the Railways Department during the last three years: in 1930, value £42,389; 1931, value £36,959; 1932, value £27,698. Oranges constituted the biggest individual item.

Federal Citrus Council.—The Secretary reported having attended a meeting of the Federal Citrus Council, held in Melbourne on March 28. He said that a long statement on the present position and future prospects of the citrus industry, introduced by Mr. A. W. Schwennesen was discussed. The statement advocated an inquiry to determine the districts most suited to the production of high quality citrus fruit, and a concentration of production into those areas. It was suggested that if the trees in the areas shown to be most unsuitable could be taken out and the growers transferred to a new area scientifically determined as being suitable, the industry would be stabilised by the entire elimination of unprofitable areas.

The Council dealt with the citrus maturity standards and endorsed recommendations of the January meeting at Gosford.

Export questions were also discussed, and an endeavor is to be made to secure shipping space for a shipment of 20,000 cases early in July.

Export of Citrus Fruits.—The Secretary reported that the Federal Citrus Council has definitely booked space for 14,500 cases of Oranges for the Orestes, leaving Sydney July 12. The Secretary further reported that the Otranto, leaving Sydney on June 24, is also under offer for 20,000 cases.

Ohanez Grapes.—It was decided to make representations with a view to the adoption of a standard weight of grapes in cases packed for export.

New Zealand Embargo.—A lengthy report was submitted of the action taken since the last meeting, particularly in reference to the deputation which waited on the Federal Government and the subsequent visit of a Federal Minister to New Zealand and an early announcement of the result of this Minister's visit can now be anticipated.

District Conferences.—The Secretary reported the fixation of the following dates for the District Conferences:—

- Northern Conference—Singleton, Tuesday, May 16.
- Central Coast Conference—Gosford, Thursday, May 18.
- Metropolitan Conference—Windor, Saturday, May 20.
- Irrigation Conference—Griffith, Thursday, May 25.
- Southern Conference—Batlow, Monday, May 29.
- Central Tablelands—Running Stream, Thursday, June 1.

In addition to the above Conferences, a North Coast sub-district Conference will be organised by the Banana Growers' Federation.

The District Conferences will be followed by the Annual General Conference in Sydney on June 28, 29 and 30.

SYDNEY ROYAL SHOW.

Best Fruit Exhibit for Years.

THE FRUIT DISPLAYED at the Sydney Royal Show at Easter was the best seen for many years. The five Apple and three Pear pyramids made a striking display and attracted much attention. Great care had been given to the selection and grading of the fruit by the various Fruitgrowers' Associations, and it was noticed that the fruit exhibited was free of disease infection or codlin moth. Batlow again won the double for Apples and Pears. They staged a fine pair of pyramids under the management of Mr. E. C. Whittaker, assisted by Messrs. Butz Bros. The evenness of the fruit was very noticeable, and varieties included London Pippins, Granny Smiths, Jonathans and Delicious. Hartley Vale came second with a well-selected lot of highly colored Jonathans, Democrats, Delicious and Granny Smiths.

The Bathurst pyramid was made up entirely of Granny Smiths, with a bright border of Democrats and diamonds of Delicious, Jonathans and Rome Beauties. Goulburn secured fifth place. The varieties in this pyramid were Jonathans, Granny Smiths, Tasma, Delicious and Commerce. The Tallong Fruitgrowers' Association incorporated a rising sun at the base of their pyramid, which was of Delicious, London Pippins, Nickajacks and Granny Smiths. The Pear pyramids were also very attractive.

In the Royal special export Apple section, two cases of each variety were judged locally and two similar cases forwarded to London for judging under the Orient Steamship Company's competition scheme; there were eighteen entries. Messrs. Butz Bros., of Batlow, won first prize. The Granny Smiths and Jonathans were very well graded, wrapped, packed and labelled. The second prize in this section went to Messrs. Baaner Bros., of Mt. Victoria, who packed Rome Beauties and Grannies. These also were well graded and packed and were a prime lot. Mr. B. E. Thompson, of Batlow, secured third prize with cases of Grannies and Rome Beauties. In some instances the fruit was a trifle over-ripe for export, and in other cases, the cases were not wired and the bulge was slack, but, taken on the whole, the exhibits were very fine.

The judges were:—Mr. J. M. Arthur, Hawkesbury Agricultural College, N.S.W.; Mr. W. H. Broadfoot, Dept. of Agric., Sydney; Mr. C. G. Savage, Dept. of Agric., Sydney (Apples and Pears); Major E. G. Monro, London (special export Apples); Mr. J. M. Arthur, Richmond, N.S.W.; Mr. R. J. Benton, Dept. of Agric., Sydney (other than Apples and Pears).

In the open classes the following varieties were entered:—Cleopatra, London Pippin, Granny Smith, Jonathans, Dunns, Rome Beauty, Delicious, Tasma, Stayman, Yates, dessert of any variety and culinary. Prize-winners were Messrs. R. H. Charles & Sons, A. S. Brown, R. M. Jones, Morris & Sons, A. & E. Vanzelia, P. E. Thompson, G. Temple, D. Hay, P. Gersbach, P. M. Baaner, Butz Bros.

In the export classes varieties were:—Rome Beauty, Granny Smith, Dunns and Tasma. Prize-winners were

Messrs. P. M. Baaner, A. & E. Vanzelia, P. Gersbach, A. S. Brown, R. H. Charles & Sons, P. E. Thompson, R. M. Jones, Morris & Sons, and Butz, Bros. In the open classes for fruit other than Apples, prize-winners were:—Messrs. A. J. Hitchcock, A. S. Brown, G. S. Pierce, S. F. Allen, P. Gersbach, E. Spring, C. E. Smith, R. H. Charles & Sons.

Young.—The local dehydrators turned out a standard Prune of excellent quality. The sizes covered a full range, smaller sizes predominating.

PALESTINE CITRUS SHIPMENTS.

Over 3,000,000 Boxes Exported.

Heavy Increase Over Last Season.

The total export of citrus fruits from Palestine up to mid-February showed an increase of nearly half a million boxes on the previous season, the export for this season being 3,088,000 boxes. The principal port of despatch is Jaffa.

GRAPEFRUIT IN U.S.A.

GRAPEFRUIT PRODUCTION in the United States has increased tremendously. The canning of this fruit is almost entirely confined to the State of Florida, and the pack in 1930-31 totalled 2,775,000 cases (including all sizes of cans) and 404,000 cases of the juice. These figures show that the output was nearly eight times as large as for the 1925-26 season. For the 1931-32 pack it is anticipated the figures will reveal that the output will approximate 1,000,000 cases. Part of this reduction is through the poor crop. Other factors in the restriction of the output have been the financial difficulties of some of the canneries and the general depression throughout America.

PRUNES OF HEALTH AND FOOD VALUE.

The nutritional value of dried Prunes, beyond their widely recognised laxative property, have not received much consideration until very recently. Dried Prunes are a good source of vitamins A and B, but do not contain C; they are richer than Apples and Pears in B. Dr. Eddy states that cooked Prunes contain 280 units of vitamin A per ounce and six units of vitamin B, and also 28 units of G, which places them in a higher class than Apples, bacon, beef, beet, cauliflower, lettuce, milk, Orange, Pear, Potato, and Tomato, and equal to Spinach, which has an equal G content. The ash contents are:—Phosphates lime, magnesia, soda, potash, also .005 of iron. A general analyses by Messrs. Gale and Cruess is as under:—Pits, 14.75 per cent.; moisture, 18.36 per cent.; total soluble solids, 77.97 per cent.; sugar as invert, 46.78 per cent.; sucrose, 3.37 per cent.; invert sugar, 43.93 per cent.; protein, 2.79 per cent.; total acid as citric, 1.20 per cent. The sugar content is a good source of energy, having 23 calories per ounce of fruit, the fruit as bought having 335 calories per pound. Prunes are thus desirable in the diet as a good source of vitamins A and B, for the hemoglobin regenerative property, for their mineral content and food value.—“Western Canner and Packer,” U.S.A.

The surest way to acquire goodwill is to do good work.

CITRUS CROPS IN VICTORIA.

THE latest report from the Horticultural Division of the Department of Agriculture, Victoria, indicates that the citrus crop in Victoria is below normal. Details are as follows. (The figures show the percentage of a normal crop):—

Echuca.—Navels, 60 per cent.; Valencias, 40 per cent.; Lemons, 75 per cent.; Mandarins, 80 per cent.; Grapefruit, 90 per cent.

Tresco.—Navels, 70 per cent.; Val., 50 per cent.; Lemons, 75 per cent.; Mand., 80 per cent.; Grapefruit, 90 per cent.

Murrabit.—Navels, 85 per cent.; Val., 70 per cent.; Lemons, 75 per cent.; Mand., 80 per cent.; Grapefruit, 90 per cent.

Nyah.—Navels, 70 per cent.; Val., 40 per cent.; Lemons, 75 per cent.; Mand., 80 per cent.; Grapefruit, 90 per cent.

Kangaroo Estates.—Navels, 85 per cent.; Val., 60 per cent.; Lemons, 75 per cent.; Mand., 80 per cent.; Grapefruit, 90 per cent.

Growers are spraying with Bordeaux as a preventive against fungus diseases. Red scale is being well controlled by spraying and fumigation.

Wangaratta District.—Navels, 70 per cent., severe January drop; Val., 90 per cent.; Commons, 100 per cent.; Lemons, 60 per cent. (weather too dry at setting time); Mand., 90 per cent.; Grapefruit, 70 per cent. (few grown).

Trees are showing signs of the prolonged dry weather, and rain is urgently needed.

Shepparton.—Navels, 80 per cent.; Val., 80 per cent.; Lemons, 70 per cent.; Mand., 80 per cent.; Grapefruit, 90 per cent.

Cobram.—Navels, 80 per cent.; Val., 70 per cent.; Lemons, 65 per cent.; Mand., 80 per cent.; Grapefruit, 90 per cent.

Nathalia.—Navels, 75 per cent.; Val., 75 per cent.; Lemons, 80 per cent.; Mand., 80 per cent.; Grapefruit, 90 per cent.

The fruit is developing well in some localities. Thompson's Improved Navels and Washington Navels are splitting, and if heavy rain falls in the near future this splitting may become more general.

Anthraxnose and Septoria spotting of fruit has not been in evidence, but growers are warned to keep these diseases under observation, especially during the next two months.

Mildura and Merbein.—Up to April 25, 142,892 cases of citrus fruit were sent from Merbein and 38,161 from Mildura were forwarded by rail.

Fresh Grape consignments this season from the Mildura district up to April 25 were as follows:—Mildura 17,534 cases, Merbein 11,014 cases.

SEVEN MISTAKES TO AVOID.

Here They Are.

The delusion that individual advancement is made by crushing others down.

The tendency to worry about things that cannot be changed or corrected.

Insisting that a thing is impossible because we ourselves can't accomplish it.

Refusing to set aside trivial preferences, in order that important things may be accomplished.

Neglecting development and refinement of the mind by not acquiring the habit of reading.

Attempting to compel other people to believe as we do.

The failure to establish the habit of saving money.

AUSTRALIAN DRIED FRUITS.

Commonwealth Export Prices.

TO COMBAT an erroneous impression regarding dried fruit prices, the Chairman of the Board of Management, Australian Dried Fruits Association (Mr. H. D. Howie) has issued a statement for publication.

Mr. Howie states it seems to be generally assumed, because there is a duty of 6d. a lb. on dried fruits and growers are well organised, that the A.D.F.A. fixes unduly high prices. This is a mistaken idea. The Association maintains a steady level of prices from year to year, avoiding the violent price fluctuations which have occurred in overseas markets, owing to accumulation of stocks, which are often sold at ruinous prices to producers and which do not benefit consumers. The error arises through comparing wholesale with retail prices. Yet retail prices in England are much the same as in Australia.

With Sultanas (the largest crop), the Association average returns per ton for the past two years are as follows:—

	Commonwealth. Per ton	Export. Per ton.	Difference. Per ton.
1930	£39 9 7	£35 8 6	£4 1 1
1931	£54 1 0	£49 19 0	£4 2 0

The difference is less than ½d. per lb., which shows that only 8.3 per cent. of the effective tariff of 6d. per lb. has been applied to Australian prices. How many industries with such ample protection have used it so reasonably?

One of the findings of the Ottawa Conference, continued Mr. Howie, was that no return to prosperity could be anticipated until price levels were restored. Although the Association has from time to time reduced prices, as with the 1933 crop of Sultanas, can it be blamed for avoiding as far as it is within its powers, those ruinous price crashes that have reduced some of the primary industries in Australia to such a parlous state that Government assistance is being clamored for? In the past, the industry has had to seek the aid of Parliaments, mainly with the view to help in the organisation and control of the industry, and it is felt that with a knowledge of these facts, the policy and practices of the A.D.F.A. will be better appreciated.

DRIED VINE FRUIT PROSPECTS.

Crop Estimated at 70,000 Tons.

Mr. W. C. F. Thomas Visiting London.

The Chairman of the Commonwealth Dried Fruits Control Board, Mr. W. C. F. Thomas, sailed in R.M.S. "Oranien" for London on April 18. Mr. Thomas is also deputy President of the Victorian Chamber of Manufactures, Chairman of its export trade, and a member of the executive of the Associated Chambers. It is his intention while in London to confer with the Empire Marketing Board and the selling section of his organisation. Recently Mr. Thomas stated that prices obtained for dried vine fruits in the past season may not be possible this season with an apparent over-supply throughout the world. Much would depend on the course of political and economic conditions in Europe and Britain. The Australian crop would be marketed with the advantage of uniformly high quality, especially for Sultanas, which would probably be of the highest standard for at least ten years. The total output in Australia might reach 70,000 tons, and it was unfortunate that such a large crop should

synchronise with the heavy production in California and the Mediterranean countries. Another factor to contend with on the European market was the production of Sultanas in Samarkand and Turkestan, where the cost of production was very low. Large importations of American and other fruits previous to the coming into force of the Ottawa Trade Agreement had over-supplied the market in Britain, but he hoped these would be reduced before the Australian fruit was marketed. It was his opinion that shipments to Canada would be maintained at the level of last season.

Mildura and Merbein.—Up to April 25 the dried fruit loadings were:—Mildura 77,443 boxes, Merbein 150,810 boxes.

Swan Hill (7/4/33).—At Woorinen and Nyah, dried fruit packing sheds are working extra shifts to receive and process fruit. At present 5,000 tons of fruit is in the sheds, and it is expected that about another 1,000 tons will be received.

GRAFTING FRUIT TREES.

Advice from Tasmania.

WITH REGARD to what is known as the "plug" method of grafting fruit trees, the Tasmanian Chief Horticulturist, Mr. P. H. Thomas, writes as follows:—

The system which is known as the plug graft has been used rather extensively this season following results obtained by Mr. F. Page during recent years at his Huonville orchard.

A large number of growers who have adopted it, however, are dissatisfied with the "take," as in the majority of cases a large percentage of misses have occurred, and it is problematical just how much the tree will be affected by the numerous wounds made during the process.

Following the losses experienced in this State under the old methods of re-working owing to wound infection by polystictus versicolor, a number of methods have been exploited in order to minimise the risks of injury from this disease.

At present four different methods are being practised, viz.:—(a) Tongue grafting method; (b) budding method; (c) side grafting; (d) plug grafting.

Both (a) and (b) have been successfully employed where trees are healthy and making fair growth. In both cases no fractures from the main stem have been experienced even when heavy crops of fruit are borne on the resultant laterals.

In both instances the trees are stripped of all growth, deheaded to approximately 1½ in. diameter wood. The resultant new growths are thinned and either budded or grafted the following season.

Regarding (c) and (d), these methods must be regarded as in the experimental stage. There is no doubt successful takes have been obtained under both systems, but we have insufficient evidence at present to be able to recommend them.

I have noticed in the American press that in some instances where the plug graft has been employed, severe fractures have ultimately been experienced when the resulting growths were called upon to bear a fairly heavy crop of fruit.

Under each system waterproofing materials such as grafting wax, bitumen, thick bitumen emulsion (Colas), and heavy petroleum jelly have been employed successfully.

(Further details will be published in next issue.)

Banana Growing in New South Wales

THE BANANA GROWING INDUSTRY of New South Wales, has made great strides. This is highly satisfactory in view of the fact that the industry was practically wiped out a few years ago through bunchy top. In 1932 the production of Bananas in N.S.W. amounted to 475,000 cases—just about the requirements of the Sydney markets, but as the Sydney market was supplied with Bananas from other sources, it was necessary to find markets elsewhere.

Great credit is due to the N.S.W. Banana Growers' Federation and its capable and virile President, Mr. H. L. Anthony. Mr. Anthony took a prominent part in the opposition to the lowering of the duty on Fijian Bananas. He is at present a member of the Commonwealth Banana Committee.

Here are some interesting statistics:—In 1930, the Sydney market absorbed 433,000 cases of Bananas, of which 110,000 were produced in N.S.W. In 1931, Sydney took 475,000 cases, the proportion from N.S.W. having increased to 237,000. In 1932 Sydney's requirements amounted to 485,000 cases, of which N.S.W. produced 373,000 cases.

Among the activities of the Banana Growers' Federation has been the organising of their marketing arrangements in N.S.W. and the other States. The growth of the trade in Melbourne will be seen from the following figures:—In 1930, Melbourne received 2,000 cases of N.S.W. Bananas. In 1931, 1,400 cases, while in 1932, owing to the vigorous policy of the Banana Growers' Federation, Melbourne had absorbed 95,000 cases of N.S.W. Bananas. In his appreciated services on behalf of the Banana growers, Mr. Anthony has visited the several

States to organise the distribution of the Bananas. In Melbourne the marketing arrangements for the N.S.W. Banana Growers' Federation are in the hands of Mr. D. G. Wills, who is also the representative for the Adelaide market. Under the present system in Melbourne the N.S.W. Banana Growers' Federation pursues a policy of limitation of agents, the present number being twelve. Growers have expressed satisfaction regarding the conduct of the business, including stabilised prices. It is understood that owing to the success of the system in Melbourne, it is proposed to organise a similar programme in Sydney.

The Federation recently arranged for a very attractive display of Bananas in a Sydney departmental store. The Federation is giving attention to cultural and research matters in order to maintain a high standard of production in N.S.W. The Federation has recently been formed into a co-operative company. In addition to being responsible for the efficient freight control and market representation now in existence, the formation of a co-operative company was deemed to be desirable in the best interests of the growers in order to supply growers' requisites.

NEW SOUTH WALES.

Levy on Bananas.

Because of the serious effects of bunchy-top, the board of directors of the Banana Growers' Federation of N.S.W., at a meeting at Murwillumbah, unanimously decided to impose a levy of 1d. a case on all fruit shipped by rail or steamer in N.S.W. These funds will be spent in the districts in which they are raised, and will be used to provide additional inspectors and to finance other methods of controlling Banana diseases.



Prolific Banana plantation near Murwillumbah, N.S.W.

SOUTH AUSTRALIA.

South Australian consignments of Celery have commenced. The opening prices in Melbourne are considered to be satisfactory, short crates have been selling at 7/- to 8/- per crate, and long crates 9/- to 10/-. This is an advance of 2/- per crate on the opening prices last year. Reports state that the crop prospects are good, and that the record shipments of last season should be surpassed. The Melbourne Market Representative of the S.A. Fruit-growers' Association (Mr. C. W. McRostie) states that the quality of the Celery this year is excellent, there being very little sign of any disease.

The first shipment for Sydney left Adelaide on the Manunda on April 24. The Association expects to double last year's Sydney shipments. Each year the S.A. product is becoming more popular in New South Wales, and this year an organised effort will be made to make regular shipments to Brisbane.

The Association has followed up previous advertising efforts by issuing recipe folders, which will be distributed in Melbourne, Brisbane, and Sydney.

Sample crates of specially selected Celery were forwarded to the East on the Show Boat, and in addition the vessel carried a fair consignment as general cargo on account of Adelaide shippers. Prospects for export to the East are promising, as the South Australian export season does not clash with the Californian season.

SOUTH AUSTRALIAN FRUIT MARKETING ASSOCIATION.

A meeting of the Executive Committee of the S.A.F.M.A. was held at Adelaide on March 31. There were present:—Messrs. H. J. Bishop (President), R. A. Cramond, R. H. Charllick, J. S. Hammat, R. B. Pritchard, J. B. Randall, P. R. B. Searcy, H. N. Wicks, R. Willsmore, and the Secretary (E. W. Mills). Apologies received from Messrs. M. G. Basey, D. W. Hannaford, and G. Quinn.

Financial statement showing balance in bank £129/5/2 was submitted by Secretary and received.

Correspondence.—Lettergram from Mr. R. E. Boardman re suggestion to send State Officer Ward to United Kingdom.

Letter from Prime Minister's Department acknowledging receipt of our letter re exemption of fruit wrapping paper from sales tax.

Letter from Oversea Shipping Representatives' Association acknowledging receipt of notice of termination of freight agreement signed by shippers in this State.

Letter from Australian Apple and Pear Export Council noting that it will not be possible for South Australia to do anything this season regarding proposed Apple gift scheme.

Letter from Royal Agricultural Society advising that the Society is unable to make a donation to the Thrips Investigation League because of the nature of its constitution.

Letter from Oversea Shipping Representatives' Association enclosing list of steamers with approximate sailing dates, number of cases allotted, and particulars of destination.

New Freight Agreement.—Resolved the Secretary write the Australian Apple and Pear Export Council asking what steps were being taken in reference to obtaining a new freight agreement.

Shipping Sub-committee.—Surprise and indignation was expressed at the report in the "Advertiser" that Mr. Stewart, Minister for Commerce, had stated that the

freight shortage had occurred only through the "ineptitude" of the people representing the South Australian fruitgrowers, and on the motion of Mr. H. N. Wicks, seconded by Mr. R. B. Pritchard, and supported by Mr. P. R. B. Searcy, the following resolution was passed unanimously.

"That after the untiring efforts of the shipping section of the South Australian Fruit Marketing Association, and the enormous amount of work done, and expense incurred, in endeavoring to get justice for South Australian growers as regards shipping space, we, as grower members of the South Australian Fruit Marketing Association, which organisation represents 75 per cent. of the growers of South Australia, emphatically protest against the statement as reported to have been made by Mr. Stewart with regard to the 'ineptitude' of this body, and consider that if correctly reported an apology be requested from Mr. Stewart for such an unworthy and entirely untrue statement about a body of men who have worked untiringly in their endeavors to ease the position."

It was resolved the Secretary forward the resolution to the Minister, and write asking if he had been correctly reported, as the members feel that a Minister of the Crown would not make such an unjust and untrue statement about a body of growers, and we hope to receive his assurance that the statement attributed to him was incorrect. A copy of the letter to the Minister, marked confidential, to be sent to Mr. J. M. Gabb, Mr. F. H. Stacey, Mr. J. L. Price, M.H.R.

Research Sub-committee.—Mr. H. N. Wicks reported that the Research Sub-committee was seriously concerned at the spread of codlin moth, and it had been decided to take active steps to have the provisions of the present Act enforced, and if necessary to have the Act amended. It had been resolved to approach the Minister of Agriculture, but nothing would be done until after the June meeting of the Association.

SOUTH AUSTRALIAN GOVERNMENT.

The South Australian State elections were held during April. The new Ministry is as follows:—

Premier and Treasurer.—R. L. Butler.

Chief Secretary, Minister of Mines and Minister of Afforestation.—G. Ritchie, M.L.C.

Attorney-General, Minister of Education and Minister of Industry and Employment.—S. W. Jeffries.

Commissioner of Crown Lands, Minister of Repatriation and Minister of Irrigation.—M. McIntosh.

Commissioner of Public Works, Minister of Railways and Minister of Marine.—H. S. Hudd.

Minister of Agriculture and Minister of Local Government.—A. P. Blesing, M.L.C.

SOUTH AUSTRALIAN FRUIT EXPORTS.

DETAILS of the shipments of fresh fruit to overseas markets up to April 15 from South Australia are to hand from Mr. G. Quinn, Department of Agriculture, the figures being:—Apples, 161,752 cases; Pears, 8,237 cases. The fruit was despatched as follows:—For London, 52,832 cases; Liverpool, 41,257; Hull, 27,338; Glasgow, 10,758; Hamburg, 14,101; other German ports, 5,390; Stockholm, 4,000; Colombo, 4,698; Netherlands East Indies, 5,020; Singapore, 3,872; Straits Settlements, 27; Egypt, 375; Rotterdam, 303; and France, 6. In addition, there were also exported 1,889 cases Grapes, 30 cases Oranges, and 13 cases Lemons.

South Australia.

Mid-Murray Notes.

Big Crops of Dried Fruits—Problems of Marketing— Maintaining High Production in Vineyards— Manurial Tests.

(By Our Special Correspondent.)

Renmark, 20/4/33.

We have had exceptionally good weather for drying our fruit this year, with the exception of two minor breaks, it has been one long stretch of cloudless skies and mild warm sunshine, right through from the beginning of February up to the present date.

Nearly all the Sultanas are dried, and are in the packing sheds, and while Lexias are coming in fast, it needs only another few weeks of this kind of weather to continue and we shall have had a record stretch of good drying weather.

Wine Position Uncertain.

Owing to the uncertainty of the wine position, our one proprietary winery has curtailed deliveries in comparison to former years, and only a limited amount of Grapes is being purchased for this vintage. On the other hand, the Co-operated winery is processing all the fruit offered by its shareholders, and this year hopes to crush 3,000 tons for the manufacture of wine and spirit.

Dried Fruit Marketing Problems.

After having successfully dried our fruit, the next matter of main consideration is the selling of it.

The production of dried fruits in the Commonwealth being considerably more than the local consumption, the greater portion of it has to be shipped to overseas markets, where it comes in competition with the other producing countries of the world, and although the Home country allows us a substantial preference there is still some anxiety about quitting our big crop at payable prices.

Samples have recently reached Australia from sales made on the London market in Sultanas from Asia Minor, showing that in spite of our preference, this country is willing to accept a very low price for its fruit, and is a keen competitor. America is faced with a surplus of dried fruits, besides many European countries; these surpluses mostly find their way to the London market, which seems to be the dumping ground of all countries.

The question of

surplus primary products

is one of great moment to this country, which depends upon the primary industries for our economic recovery. Almost without exception, every producing country of the world has an exportable surplus which cannot be absorbed. In supplying the wants of the United Kingdom in Currants, we supplant the Greeks, who have supplied this market for many centuries, likewise our Sultanas have replaced a great quantity usually supplied by Asia Minor and America.

Two courses are open to all producing countries, one of which is to regulate production to meet the world's requirements, and the other is to accept reduced prices to meet the competition in conformity with the laws of supply and demand. The former course is the more satisfactory, and could be followed only by international agreements to bring world supplies into line with consumption.

Maintaining High Vineyard Production.

Many vineyards in various parts are showing a gradual reduction in crop returns, especially is this the case with

Currants. The constant practice of cincturing has a weakening effect upon the general health of the vine, until the crop becomes uneconomic.

A very successful method of reconstituting a vineyard without losing a crop is to cut off the main stem in the winter, a foot or two from the ground level. When the new growth comes along in the spring, select three strong growing shoots, and train two of them on to the wires, allowing the third shoot to more or less run wild. Keeping it of course out of the way of the cultivator. Later on, the two rods trained on the wires will be thick enough to be cinctured, and the third rod, which is left uncinctured will form a layer and brought down close to the butt of the old vine. As soon as this layer is well rooted, the old vine is grubbed and your vineyard will be renewed. This method has been successfully carried out by many growers at Clare, of whom Mr. "Danny" Vectorsen is one. Clare growers are harvesting extraordinarily heavy crops of Currants this year, some of which are going as high as 2½ and 3 tons per acre.

These heavy crops are partly due to the favorable seasonal conditions, and partly due to improved cultural methods.

Experiments With Manures.

Great interest is being taken in the manurial trials being carried out by various growers under supervision of the Horticultural Instructor (Mr. Harris) and Mr. A. V. Lyon, M.Ag.Sc., working through the C.S.I.R. Keen interest is being taken throughout the district in this work, and it is hoped that experiments will lead to some data of permanent value. Cultural methods on the non-irrigable areas taken generally, are not to be compared with those adopted by growers under irrigation, but in the short space of time already devoted to experimental work clearly it shows that marked improvements are noted in areas under observation, and the experiments of to-day will become the general practise in the course of time.—"Nemo."

The South Australian Fruit Marketing Association is to be congratulated on the success, both as regards the commercial and cultural sides of the industry. The Research Committee meets on the same day as the monthly Executive meeting—an hour before the general meeting commences. Mr. H. N. Wicks is the Chairman of this Research Committee and some extremely valuable work has been accomplished.

Adelaide Market Prices.

Adelaide (26/4/33).—Apples (eating), 4/- to 5/- case; do. (cooking), 2/6 to 3/6 case; Bananas, 22/- to 26/- crate; Figs, 6/- case; Grapes (dark), 8/-; do. (white), 6/-; Lemons, 6/- to 8/- case; Oranges, common, 6/- to 8/-; do. (Navel), 8/- to 10/-; Passions, 26/- case; Peaches, 6/-; Pears (eating), 5/- to 7/- case; do. (cooking), 2/6; Pines, 18/- case; Plums (Damson), 6/- case; Pomegranates, 4/- case; Quinces, 3/- to 4/- case.

Ladies First.

After the locomotive had smashed a flivver at the crossing, a flapper rose from the wreckage, practically uninjured. The engine-driver and others gathered around.

"Why in the world didn't you stop when you saw the train coming?" asked the engine-driver.

The flapper was indignant.

"I sounded my horn before you blew your whistle," she told him.

Seasonable Orchard Notes.

SEASONABLE ORCHARD WORK was dealt with in a broadcast talk by Mr. J. M. Ward, Superintendent of Horticulture, over 3LO, Melbourne, on April 4. In the course of his interesting remarks, Mr. Ward stated:

Trees generally show fairly good promise so far as fruit buds are concerned for a reasonably good crop for next year. We do not of course know what may happen between now and the setting of the fruit.

Pruning.

In regard to pruning, most Apple growers have of recent years been in the habit of leaving a greater quantity of laterals than was formerly done. This practice should be continued, as many of the fruit spurs that have produced Apples this year will not develop fruit buds to the same extent as was done last year; therefore the grower should give the tree every opportunity to produce fruit on the laterals next year. In short, leave as many laterals as possible throughout the tree, and cut out some of the older fruit spurs. It is taken for granted that only those laterals having a fruit bud at the terminal will be left.

The grower will of course exercise judgment in the matter of individual trees and orchards and vary the pruning accordingly. Concentrate, however, in giving the trees the opportunity to make full use of the fruiting laterals.

Manuring.

In respect to manuring the trees, many things have to be considered,—quality of soil, condition of tree, etc.: as it is impracticable to recommend a particular fertiliser for each class of soil, we can only generalise.

Certain varieties of trees, such as citrus, stone and pome fruits require more of one class of fertiliser than another. For instance, an Orange tree usually requires more nitrogenous manure than an Apple tree; I desire to impress upon many Apple growers that the continual use of superphosphate without other fertilisers is eventually detrimental to the Apple trees. What suits wheat does not necessarily suit a fruit tree; therefore the two must be entirely separated. I am well aware that many Apple growers use super. only, as a manure, and then wonder why their trees are not standing up to the job.

After a heavy cropping season, such as we are now experiencing, it will be necessary to apply a

liberal dressing of nitrogen,

and thus give the blossoms some assistance to set fruit. In certain orchards it would be preferable to cut out the use of super. and use a nitrogenous fertiliser rather than to continue with super. only; that is, replace the 2 to 5 cwt. of super. per acre with 1 to 2 cwt. of sulphate of ammonia. Better still, apply during the beginning of September a complete fertiliser such as 2 cwt. of sulphate of ammonia, 2 cwt. superphosphate, and 1 cwt. sulphate or muriate of potash per acre. If individual trees are at a standstill so far as growth is concerned, or are looking poorly, an additional lb. or two of Am. sulphate should be applied to each such tree.

The application of fertiliser, particularly to trees that have had little or no manure during the past few years will be of great benefit to the trees after carrying such a heavy load of fruit; and I am sure that if the trees could but talk they would express their gratitude for having such a meal. Many of them will, however, show their appreciation by setting a better percentage of fruit next spring.

Green Manuring Important.

One is of course aware that all Apple growers are extremely busy picking and packing the crop; but where it is at all practicable, an endeavor should be made to grow a crop of some kind of herbage. Preference should be given to a leguminous crop, such as beans, peas, etc.; but if this cannot be done, oats or barley will serve the purpose. Where good herbage, such as cape weed or other weeds are or will make good growth, they should be encouraged at this time of the year. In cases where such herbage is present in the orchard, but does not make good growth, it should be encouraged by giving the orchard a dressing of about 1 cwt. of sulphate of ammonia per acre. This can be applied at any period from now on until the winter; and it will be noticed that improved growth will result, in which case there will be no necessity to grow a special green crop. Better results will be obtained from application of fertiliser when the soil is supplied with plenty of humus, hence the value of the green crop.

Control of Fungus Diseases.

As brown rot of stone fruits has been so much in evidence lately, stone fruit growers should exercise every care in the removal of all "mummy" fruit, that is, the fruit that has dried up as the result of brown rot. Such fruit, together with affected wood, should be burnt or removed outside the orchard, and thus lessen the source of infection for next season's crop.

Measures for the control of shot-hole or scab of the Apricot should be given attention this month by an application of Bordeaux mixture, using the 6-4-40 formula. The foliage and every other part of the tree should receive a thorough spraying, and this should be repeated before bud burst in the spring.

Less Irrigation, More Cultivation.

It would be a wise move on the part of some of the Goulburn Valley growers to apply less irrigation at this period of the year than they have been in the habit of doing in the past, and carry out more cultivation and conserve the water by a mulch of well cultivated soil. Irrigation water should be used and not abused.

Angle and Straight Packs.

Packing.—Most of the modern growers know that the Department has this year advised packers to change over from the angle to the "straight" pack. Where this has been properly carried out, a splendid pack has resulted. This method of "straight" packing applies only to the standard case—the Canadian—and not to the dump case. Unfortunately, however, a number of packers have been using it for the dump case, resulting in a high pack and considerable bruising of the fruit after the lid is put on. I would urge growers and packers to continue with the angle pack in the "dump" case.

Slack Pack Unsuitable.

A considerable number of grower-packers are making a loose pack in the standard case. They are putting insufficient Apples in the layers; many cases that I have examined at the ship's side should have had two or three more Apples in each layer. A large number of cases—thousands in fact—have had to be repacked owing to slackness. I trust growers will remedy the defects. Should they require tuition in packing, and write to the Department, I shall make every endeavor to arrange for a packing instructor to visit them. We have a Departmental pamphlet with full details of the pack and counts for the various Apple and Pear cases used, and would be pleased to post one to any grower or packer requiring it.

VICTORIA.

The Harcourt District.

Record Crop of Apples and Pears.

GREAT ACTIVITY is manifest just now in the Harcourt district. Growers are busy packing their record crop of Apples and Pears, which is estimated between 700,000 and 800,000 bushels. About 350,000 bushels are required for export. In addition, Harcourt has a substantial interstate trade, particularly in Brisbane. The fruit this season is of excellent quality, being clean and well-grown. The principal varieties for export are Dunn's, Cleos., Jons., Granny Smith, London Pippins, Stone Pippins, Sturmer, Rome Beauty, Rymer and Schroeder. Pears for export include Josephine, Packham, Winter Nelis, B. Bosc, Winter Cole and Broom Park.

Visits to the packing houses and orchards were full of interest. At the Harcourt Fruitgrowers' Progress Association over 100,000 cases had been packed for export up to the end of April. An additional 30,000 cases have still to be packed for export. To cope with the rush for export the packing staff at times has to work in shifts for the full 24 hours of the day. A staff of 90 is employed, including packers, casemakers, lorry hands, etc., under the supervision of Mr. V. Wilkinson, shed foreman. The "straight" pack system for Apples, as recommended by the Department of Agriculture has been adopted. A fruit grader and up-to-date equipment are installed, including the rapid "T" model wire banding machine; both machines are performing excellent service. Practically the whole of the export is in the standard (Canadian) case. On the end of the case, the attractive Peak Pack label is affixed. This shows a triangle with a red Apple at the base. In addition to handling fruit for export, this packing house sold 200 tons of Plums and 200 tons of Williams Pears for canning.

The directors are Messrs. J. H. Ely (Chairman), H. M. McLean, G. Douglas, W. Eagle, K. Eagle, H. Frankling, F. Gaash, with Mr. H. Clark as secretary. Mr. Clark speaks appreciatively of the services of the Railways Department. Courtesy and prompt attention have been given at all times, the trucks for loading being frequently available a day ahead of the time for despatch.

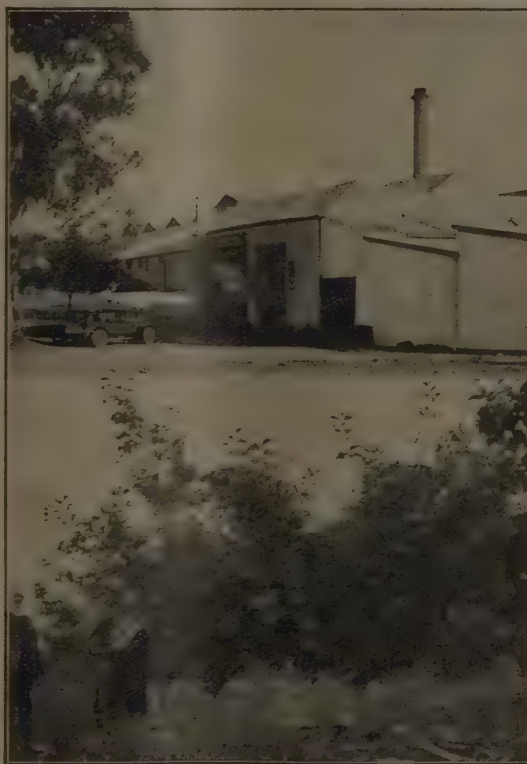
At the Harcourt Fruit Supply Limited, an excellent pack of Apples and Pears is being put up. Just now the management and all hands are concentrating on the export business. In one day over 1,800 cases were packed for export, 98 per cent. being in the standard (Canadian) case, embellished with the appropriate "Doctor" brand label—showing a cheerful doctor whose mission it is to keep people in good health by eating Apples. The principal Apple variety packed is the Dunn's (Munro) followed by Jons., Cleos., Londons, Delicious, Sturmer, Schroeder, etc. The Pears include Josephine, Winter Nelis, B. Bosc, Winter Cole, Packham and B. d'Anjou. The fruit is machine graded and packed on behalf of growers, who are at liberty to deal with their fruit as they desire, the fruit being sold or sent on consignment according to the wish of growers.

The directors of the Harcourt Fruit Supply Limited are Messrs. J. H. Lang (chairman), H. V. C. Wilson (managing director), M. E. Winch, J. H. Fogarty, T. Code, and R. Portwine. At the time of visiting the packing house the space was fully occupied, and the staff working with keenness under the supervision of Mr. E. Martin, shed foreman.

A visit around the orchards showed that most of the

crop had been harvested. In many orchards, Rome Beauties were still on the trees—a very pleasing sight, with the red Apples showing up against the green leaves. The limbs were propped to assist in carrying the heavy weight of the crops. Mr. L. H. Eagle has 70 acres, 30 of which are under orchard—20 acres of Apples and 10 of Pears. The principal varieties grown are:—Apples: Duns, Jons., Londons, Cleos., Delicious and Rome Beauties. Pears: Winter Nelis, Josephines and Packhams. The crop for this season is about 9,000 cases. The fruit is packed in a packing shed on the property and a "Lightning" grader has been installed.

At North Harcourt, Ford Brothers have an 80-acre orchard, the principal varieties being Duns and Jons. Pears are Winter Nelis, B. Bosc, and Josephines. Just on 20,000 cases are being packed this season in an up-to-date packing house. The fruit was clean and of an even size. Working on the size 150 to 175 Apples per case, the average tally per packer was 90 cases per day, every Apple being neatly and firmly wrapped. The packing house is under the supervision of Mr. Harry Ford, the brothers Frank and Jack being in charge of the picking and carting. After the picking is completed, the orchard will receive dressings of lime and superphosphate. The trees are looking well and a nice area of young orchard is coming on. "Lightning" fruit graders are installed at the several packing houses in this district.



Top: Harcourt Fruit Supply Ltd. packing house in foreground; Harcourt Cool Stores (80,000 cases) in background. Lower View: In Messrs. Ford Bros.' orchard at Harcourt, N. In the picture are Mr. L. J. Tuckfield, Mr. H. Ford and Mrs. Tuckfield.

Appreciation was expressed in the district of the services of Mr. W. H. Harris, Fruit Packing Instructor, Department of Agriculture.

It has been estimated there are 500 new employees at Hârcourt during the present picking and export season—over a dozen are from Tasmania.

Orchards in the Strathfieldsaye and Sedgwick districts have yielded abundant crops of Apples and Pears this season. It is estimated that the crops in this locality will run into about 50,000 cases.

Fryerstown.—Excellent crops of Apples and Pears have been produced this season.

FRUIT CROPS IN VICTORIA.

THE latest seasonal report from the Victorian Department of Agriculture regarding fruit crops is as follows:—

Deciduous Fruit.

The wonderful fruit crop that is still being harvested this season is an indication of the prolificacy of our soil, provided suitable conditions are given. Not only has the

some vineyards. Though the crop is not heavier than last year, there will be much less loss from rain damage and rather more wine should be made. Quality will be high. Vintage is now in full progress after a late start, as few commenced before March 27.

In the dried Grape areas similar conditions have been experienced. The drying season is almost ideal with the exception of some cold nights. Currants are now harvested and dried. Some damage resulted from the January rain. Quantity suffered little, but in some cases the grade was reduced. Sultanias did not suffer from this rain, and nearly the whole crop was picked under almost ideal conditions. This year's pack should constitute a record grade. The mixed dip has again been most largely used, though there is a growing tendency in seasons such as this, towards the cold dip, which, with perfect fruit, good drying weather, and adequate rack accommodation, turns out the highest grade article.

Fine table Grapes have been much in evidence in Melbourne shops and barrows, mostly from Mildura. Waltham Cross is still the favorite: black, red and purple are in lesser demand. Oidium damage has been noted in some Walthams. Prices this year have, over periods, been disappointing, though offerings were rather less than last year.

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Etc.

Our record of over 30 years' standing
in the handling of Australian fruit,
with satisfactory results, is a recom-
mendation for growers to ship their
fruit to our house.

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International Fruit & Mercantile
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and A. J. Walshe & Co., Hobart,
Tasmania.

Apple and Pear crop constituted a record, but there seems to be, from present figures, a record in canning Peaches. The Apricot is the only fruit variety that was generally light. In all other classes of fruit, trees were laden almost to their full carrying capacity. In some cases in the Goulburn Valley blocks of fruit are known that this season have produced eight tons of Pullar's Cling Peaches per acre.

With the exception of brown rot of stone fruits, loss from disease was very light. Codlin moth infestations were very light; woolly aphid is now held in check.

Up to the end of March, 534,486 cases of Apples, 177,925 packages of Pears, and 3,624 packages of Plums, making a total of 716,035 packages of fruit, had been exported from Victoria to the United Kingdom and Continent during the present fruit export season.

Viticulture.

March has been an almost rainless month. A frost on March 21 did no harm to the vines, but wrought sad havoc with tobacco crops in the hills.

The vintage is an excellent one, and it is proceeding under very favorable conditions, though a little more rain some weeks back would have improved matters in

BROADCAST TALKS FOR FRUITGROWERS.

Fruitgrowers will follow with interest the broadcast talks arranged by the Horticultural Division of the Victorian Department of Agriculture as follows:—

May 5.—"Harvesting of Oranges," by Mr. J. L. Provan, B.Agr.Sc., Horticultural Research Officer.

May 30.—"Winter and Spring Injury to Deciduous Fruit Trees," by Mr. A. G. Strickland, M.Agr.Sc., Horticultural Research Officer.

June 13.—"Winter Work in the Orchard," by Mr. Frank M. Read, M.Agr.Sc., Senior Horticultural Research Officer.

June 23.—"Review of the Fruit Export Season," by Mr. J. M. Ward, Superintendent of Horticulture.

These talks are from Station 3LO Melbourne, at 7.45 p.m.

A LARGE PEACH.

A Pullars Cling Peach weighing 17 oz. was recently grown by Mr. A. E. Russell on the Murrumbidgee irrigation area.

VICTORIA.

Narre Warren.—The fruit section of the Narre Warren and District show resulted as follows:—Jons, R. A. Kent; Romes, A. V. Fullard; Del, R. A. Kent; Five-crown, A. V. Fullard; G. Smith, R. A. Kent; any other variety, F. B. Aumann; dessert Apples, W. Schukraft; Packham's Pears, F. B. Aumann; Beurre Bose, A. V. Fullard; Keiffers, P. Aurisch; export Apples, R. A. Kent.

Tallangatta.—At the annual horticultural show of the Presbyterian Church the fruit section resulted as follows:—Cooking Apples, dessert Apples, and Pears, H. Pearce; Quinces, Mrs. W. Wood.

Mitcham.—At the fourth annual autumn show of the Mitcham and District branch of the Returned Soldiers' League there was keen competition in the fruit section, both Apples and Pears shown being of excellent quality. In the count for a special prize for the most points gained Mr. J. F. Thiele secured 66 and Mr. W. Mock 65.

Kallista.—There were over 360 entries at the annual fruit and flower show on April 22, which was opened by Ven. Archdeacon Booth. The following were the awards in the fruit section:—Four Jon. Apples, F. E. Allen; four Five-crown Apples, Mrs. A. C. Drury; collection Apples, J. P. Cowey; six Lemons, A. H. Duddy; four Quinces, C. G. Reid; twelve Passion Fruit, T. J. Bowman; twelve Walnuts, Mrs. D. O'Donohue; collection Chestnuts, Mrs. C. G. Reid.

Ferny Creek.—The following are the awards in the fruit section of the Ferny Creek Horticultural Society's show which was held on March 25:—Jonathan Apples, W. G. Rowse and Son 1, A. N. Webster 2; Five-crown, W. G. Rowse 1; collection of Apples, W. G. Rowse 1; cooking Pears, C. E. Robertson 1; Lemons, W. G. Rowse 1; Quinces, Harry Breen 1; Filbert nuts, Mrs. Alger 1; one kind of fruit, C. E. Robertson 1, Mrs. W. Jones 2.

Sassafras.—A successful show was held under the auspices of the Sassafras Horticultural Society when the fruit section resulted as follows:—Three Lemons, W. G. Rowse 1, G. Smith 2; 12 Passion Fruit, W. G. Rowse 1; dish Strawberries, W. G. Rowse 1, A. Matheson 2; 12 Walnuts, J. D. Warner 1, W. Jackson 2; 12 Filberts, John Buzaglo 1, Mrs. Argaet 2; box Strawberries, W. G. Rowse 1, Mrs. Argaet 2; collection Apples, W. G. Rowse 1, W. Jackson 2.

Warrandyte.—Mr. Everard, M.L.A., opened the fruit and flower show held during April. Principal fruit awards were:—Jon. Apples (J. Coleman); Stewart Seedling (A. Mackinlay, J. Coleman); Five-crown (W. Hussey); R. Beauty (Miss N. Scarborough); Del. (Miss N. Scarborough); Pomme de Neige (W. Tortice). Pears: Black Achan (A. Mackinlay); Keiffers (J. Tortice); Lemons (J. Reed); Quinces (J. Coleman); Grapes (Mr. James); Tomatoes (C. Cameron).

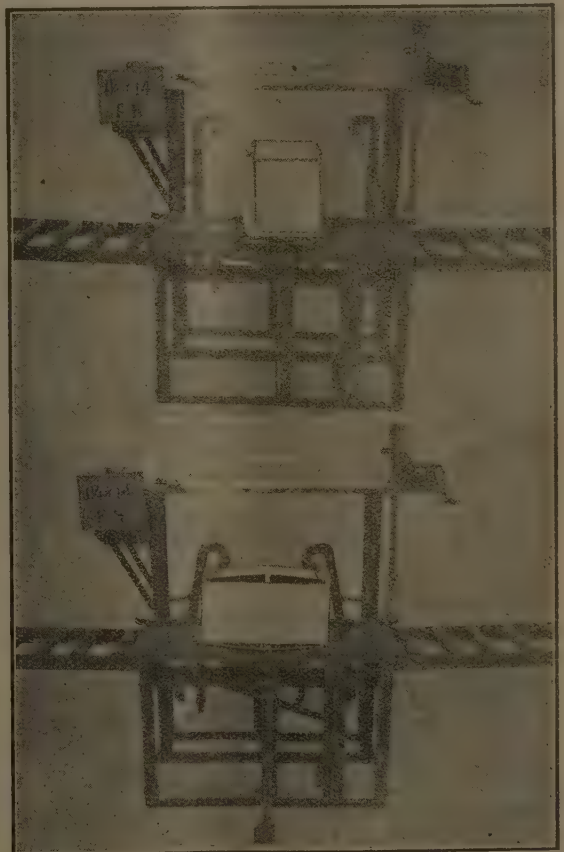
Olinda.—In the fruit section of the Olinda show, held on April 8, good quality Apples, Pears, Quinces, Strawberries, etc., were shown. Prizes were won by W. G. Rowse, Mrs. Saw, — McGregor, J. Ellis, A. W. Smith. J. D. Warner.

Katandra West.—At the annual show held under the auspices of the Katandra West branch of the Country Women's Association, the following awards were made in the fruit section:—Six Lemons, Mrs. J. Colwell; des-

sert Apples, Mrs. McConnell; cooking Apples, Mrs. Lovett; cooking Pears, Mrs. J. Colwell; Grapes, Mrs. M. Donohue; Quinces, Mrs. S. Coleman.

Horsham.—At the Horsham Horticultural Society's show the fruit section brought forth some fine samples, and the following awards were made:—Collection fruit, Mrs. W. Kuhne; collection Apples, W. Kuhne; collection Pears, Mrs. H. J. Randall; light Grapes, Miss Waterfield; dark Grapes, Mrs. Randall; Peaches, W. Kuhne; Quinces, Mrs. H. J. Randall; Lemons, Mrs. E. Wirth; Tomatoes, W. Fraser.

Lidding Press.—An interesting piece of machinery was noted at the packing house of the Harcourt Fruit Supply Ltd. This was a "Lightning" three-way all-metal lidding press, which is fitted with turntable for wire tying. The machine is strongly constructed, has wide clearances, and is adaptable for using the dump case, Canadian bushel, Canadian citrus export, Canadian 20 x 11 x 10 export Pear and petrol case. The lidding arms were noted to be adjustable to a fraction, either horizontally or vertically by accurate adjustable distance pieces. Places were provided for cwt. nail case, hammer, lids, cleats, wire tying machine and wire. This machine saves both time and labor.



New labor-saving lidding press at Harcourt Fruit Supply Ltd., Harcourt, Vic.

FRUIT PACKING INSTRUCTION.

Several New Packing Houses.

THE SYSTEM OF FRUIT PACKING instruction conducted by the Victorian Department of Agriculture is highly esteemed by growers. The Superintendent of Horticulture, Mr. J. M. Ward, has done much to encourage improved packing methods. The actual instruction work is carried out by Mr. Basil Krone, Fruit Packing Instructor, and his assistant, Mr. W. H. Harris. Mr. Krone visits the various packing houses throughout the State, and advises regarding the latest methods, etc. He also conducts packing classes as opportunity offers. One packing class has recently been conducted at Somerville, and it is expected that classes will be conducted at Tyabb, and possibly, Hastings, during May.

During the Pear packing season, Mr. Krone gave attention to the Shepparton district, and assisted in the packing arrangements for such varieties as Williams, Beurre Bosc, Josephine, Winter Nelis, etc. It is a matter of interest that the Shepparton district, which heretofore has not figured largely in Apple production, is now coming to the fore in this connection, especially in the production of such varieties as Dunn's and Cleopatras.

Among the packing houses recently organised are the following:—

Bacchus Marsh.—This shed is conducted by Messrs. F. Cave & Co. Pty. Ltd., with Mr. George Grant as manager, Geo. Anderson, Secretary. A Lightning Grader has been installed, also other up-to-date packing house equipment. Mr. Krone speaks appreciatively of the high quality fruit and the excellence of the pack. At Diamond Creek the shed is also under the supervision of F. Cave & Co. Pty. Ltd. Mr. W. Sinclair is the manager, and excellent work is carried on here.

There is a new shed at Ringwood, conducted by Messrs. MacQueen and Son. Here a Harvey grader is installed and much good work is done.

Arrangements for the erection of a packing shed at Portland are now well advanced. This district produces excellent quality Apples and Pears, and is also a big factor in the production of Tomatoes. The packing shed is thus equipped to handle Apples, Pears and Tomatoes. It is understood this is the first shed erected in Victoria for dealing with community Tomato packing. The idea is that Tomatoes will be packed and despatched according to market requirements; for instance, using the half dump for the Sydney trade and the long bushel for the local markets.

At Beechworth, Messrs. Barker, Green and Parke have established a packing shed for handling Apples and Pears for export. Reports to hand indicate that a high quality pack has been put up.

Mr. W. H. Harris is conducting fruit packing classes for young people at the schools in the orchard districts. His itinerary for May is as follows:—

Monday.—Harcourt North and South Ravenswood. Tuesday.—Harcourt and Campbell's Creek. Wednesday.—Elphinstone. Thursday.—Pakenham Upper. Friday.—Pakenham, Pakenham East and Army Road, Pakenham.

It is of interest to note that many of the young people who have been trained at these packing classes are now packing fruit at their parents' orchards. It is expected that an adult's packing class will be commenced at Strathfieldsaye very shortly.

Doncaster.—Fruit picking and packing has been proceeding at high pressure, especially in the despatch of Pears for export overseas. The Trade Exhibition ship, the "Nieuw Holland," left for Java with about 15,000 cases of Packham Pears and Five Crown Apples, all of which have been sold in advance.

Advices from London have been received as to the prices for earlier shipments on the "Ballarat" and "City of Glasgow," viz., Howells, 9/- to 12/- per case; Bosc, 14/-; D. Bossuch, 10/-; Packham, 13/-; Williams, 6/- to 10/-. The latter variety arrived in poor condition. These prices, plus exchange, show a good return to orchardists.

Pakenham.—A record quantity of fruit is being harvested and despatched. At the end of March 62,545 cases of Apples and Pears had been loaded at Pakenham station for shipment overseas, and in addition 8,331 cases had gone forward to various parts of the State.

Officer.—Fruitgrowers are having an exceedingly busy season. Thousands of cases of Apples and Pears have been despatched for overseas, local and interstate markets.

Sassafras.—Awards in the fruit section of the Sassafras Horticultural Society's show on March 27 were:—Lemons, Passionfruit, Strawberries and collection of Apples: Rowse & Son. Walnuts: J. D. Warner. Filberts: J. Buzaglo.

Inquiring Son: "Dad, what makes a man always give the lady he is engaged to a diamond ring?"

Father: "The lady, my dear."

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CITRUS NEWS AND NOTES.

Citrus Bud Selection.

(By R. J. Benton, N.S.W.)

(Continued from April "Fruit World.")

Variations in Valencia Late.

IN VALENCIA LATE many departures from the best strains are evident, and tests with progeny trees are necessary to determine even whether an apparently otherwise satisfactory type is not an inferior one on account of irregularity in production. Some trees bear more regularly than others, whilst some are regular in bearing in alternate years.

Valencia Late is a roundish fruit, bright orange in color, with a thinner skin than the Washington Navel and less rag. Seeds are few in number, ranging in most Oranges from 2—6. Juice is abundant, being mostly 38 per cent. to 45 per cent. of its gross weight: such is acid ranging to sweet acid in its best condition, but in over maturity the juice declines in quantity and acidity.

Trees occasionally found amongst Valentias and supplied as such are of Holdfast variety. This is a very old strain, introduced prior to the Valencia, having long hanging characteristics. Its main difference is that a thicker rind is present, with a little deeper orange-colored flesh and many seeds, often being 12—20 in number. Instead of being so rounded at the stem end as the Valencia, the Holdfast type is somewhat flattened or depressed.

There are a number of trees also of a long strain in which the length is almost $1\frac{1}{2}$ times the diameter. Whether this is advisable or not I am uncertain, though some trees appear to be more regular and productive than others. These fruits are sometimes seedless.

Trees bearing a very large percentage of Pear-shaped fruit, and others bearing fruit mostly corrugated, are not uncommon.

Trees bearing much ribbed fruit are common, as are also trees displaying a very sporting character, by the fruits showing sunken and raised sections, corrugations, ridging, long flat or other mutations.

Limb variations are frequently found, the most prevalent of which is probably the heavily corrugated type. The variations in the Valencia appear to be as frequently met with as in the Navel types.

Individual fruit variations are frequently met with, displaying the same characteristics of their off-type character as in the limb variations. In addition, occasional specimens of good type Valentias, displaying a distinct Navel formation, also a variegated fruit and foliage condition, have been noted.

To secure uniformity in the standardisation of Valentias, the working over of Holdfast types, also elongated, Pear-shaped and sporting types, is advisable.

In the Emperor Mandarin,

the best strain is oblate in shape, with a raised nipple at the stem on very occasional specimens. Departures by variation from this strain are evident on very many trees which produce nearly all fruit with a nipple at the stem end (like Glen Retreat), and of a shape tending towards ovate. The difference in texture of flesh and seed content is not marked.

Limb variations are not uncommon, particularly of a ribbed nature. From a limb variation of such character many trees have been propagated in one locality owing to the tendency of such strains retaining its juice content a little longer than the Emperor strain.

Individual fruit variations are commonly met with on trees of a sporting character.

Ribbed fruits, raised and also sunken sections, corrugated and long types being some of the mutations recorded.

One of the most interesting trees was owned by Mr. F. Nicolson, of Glenorie, which was almost totally variegated in foliage and fruit. Only a small limb near the top of the tree being of normal Emperor character being about 5 per cent. of the bearing area.

Types of Lemons.

Eureka Lemon frequently so called sweet rind and similar types have been observed and very similar variations have been noted as in the case with Orange and Mandarin varieties.

This Lemon variety is an excellent bearer with fruit of a slightly oval shape, partly depressed at the blossom end. In some soils this tendency to end rather abruptly at the stem end seems to indicate such as being due to other factors than type. Seeds are few, whilst the tree development is towards rather long, somewhat bare shoots which furnish fairly well only after fruit is carried. Thorns are very rare, and small if present.

Off type trees are mainly of a less productive character which is reflected by a more vigorous wood development.

The size and shape of the fruit is usually distinct in that it is more variable, some being more elongated and others more rounded.

A pronounced sporting tendency

is occasionally seen in which Lemons with a navel formation, projecting noses, also very necked or bottle-shaped tendencies are present. Though trees of a sporting character may bear well, they should be reworked for the culling of so many mis-shapen fruit is a loss that can be avoided.

In regard to

Marsh Grapefruit,

though a marked difference is found in many trees in regard to a reduced amount of seeds as compared with other trees.

We have not been able to record any limb variations as is the case with the other citrus varieties mentioned.

The differences so far determined are mainly in seed content. Some trees produce fruit of from 0—4 seeds, whilst others appear to range from 4—5 to double that number. Insufficient opportunity has yet been possible with the rather limited areas planted with Grapefruit of Marsh type, to record them closely.

(To be continued.)

SPANISH ORANGE TRADE.

Effect of Ottawa Agreements.

Spanish Orange exporters are greatly perturbed regarding the British duties on Oranges through Ottawa preferences, which came into operation on April 1. It is stated that large numbers of workers will be rendered idle and severe losses will be caused. Representations have been made by the Spanish Foreign Minister to the British Secretary for Foreign Affairs, who is consulting the Dominions, as the duties are the outcome of the Ottawa agreements.

Citrus Crops on M.I.A.—Navel Oranges on the Murrumbidgee irrigation areas indicate a fair crop of high quality fruit. Valentias are showing for a heavier crop than was anticipated earlier.

CITRUS CULTURE IN QUEENSLAND.

Young citrus orchards can be set out now in the coastal districts, provided that ground is in good order. Don't make the mistake (states the "Queensland Agricultural Journal") of planting the trees in improperly prepared land—it is far better to wait till the land is ready, and you can rest assured it will pay to do so in the long run.

When planting, see that the centre of the hole is slightly higher than the sides, so that the roots, when spread out, will have a downward, not an upward, tendency; set the tree at as nearly as possible the same depth as it was when growing in the nursery, cut off all broken or bruised roots, and spread those that remain evenly and cover them with fine top soil. If the land is dry the tree should then be given a good watering, and when the water has soaked in the hole can be filled up with dry soil. This is far better than watering the tree after the soil has been placed round it, and the hole filled up.

Citrus Culture in Victoria.

During the winter months, many citrus groves in the irrigated districts have an abundance of weed growth; in some instances this will be up two feet in height (stated Mr. J. M. Ward, Superintendent of Horticulture, in a broadcast talk on April 4).

Continuing, Mr. Ward stated that it would be a good practice to plough this under some time before harvesting takes place, paying particular attention to the weed growth close up to the tree. The removal of this herbage will somewhat assist growers to control black spot of the Orange, especially if we meet with a wet winter; some districts are more affected with the black spot fungus than others, and owing to the wet weather during the past few winters, this disease has been all too prevalent.

Spraying for Black Spot.

Citrus groves that have been badly affected in the past should be sprayed with Bordeaux mixture at the 3-3-50 strength (3 lbs. copper sulphate, 3 lbs. lime and 50 gallons of water), giving special attention to the lower parts of the tree.

CALIFORNIA TO ELIMINATE LOW-GRADE ORANGES.

Voluntary Control Board Formed.

LOW GRADE NAVEL ORANGES are a problem in California, and the increase in the production and distribution of this fruit has resulted in the formation of a voluntary Control Board for the purpose of limiting the area in which the poor grade fruit can be distributed, also the manner of distribution, in order to protect the standard advertised brands and keep faith with the public.

Two thoroughly representative conferences were held, when the large co-operative organisations, also private commercial Orange distributors, were fully represented. Briefly, the plan is that this poor grade fruit shall be sold only in Southern California, and that substantial quantities be diverted to charitable organisations and to by-products plants. One idea was put forward that this low quality fruit be destroyed, but this was emphatically negated. By controlling the distribution of the poor quality Oranges, it is hoped to maintain a steady trade with the recognised standard grades of "Sunkist," "Pure Gold," and approved proprietary brands.

The Control Board is representative of the entire citrus industry and consists of men elected from the citrus packing houses and proprietary firms.

BLEMISHES ON ORANGES.

Due More to Mechanical Injury Than by Thrips.

GENERAL opinion among growers of citrus is that surface blemishes of Oranges are caused through insects, mainly thrips, but in a recently published work by Dr. J. Davidson, of the Waite Agricultural Research Institute, University of Adelaide, this opinion is dispelled to a certain extent. Blemishes are caused by weather conditions, insects and the escape of oil from the oil vesicles of the skin. Dr. Davidson states that a mechanical injury to the rind of a young Orange might develop into a prominent blemish when the fruit is mature. Severe rubbing against a branch may be an



SOME OF THE STAFF AT THE VICT. GOVERNMENT PLANT RESEARCH LABORATORY, BURNLEY:—

Back row (left to right)—K. Ward, B.Ag.Sc. (Asst. Entomologist); F. Bowman (Seed Tester); N. L. Johnson (Field Officer).

Front row—S. Fish, M.Ag.Sc. (Asst. Plant Pathologist); C. French Jr. (Biologist in Charge); R. T. M. Pescott, M.Ag.Sc. (Entomologist).



Sow "Green Feast" Peas now for early Spring crops.

other cause. The tissues become dry and hard in the affected area. Even in older fruit, persistent rubbing causes blemishes. A hailstorm can do a lot of harm to young fruit. The views of citrus growers in S. Australia that thrips were chiefly responsible for rind markings on Oranges were probably due to the literature published in California on citrus culture. The thrips that caused rind blemishes in that country were different from the thrips found in Australia. There was no definite evidence that the locally found species did feed on young Orange fruit, although it was not improbable that, to a small extent, it did so. The surface blemishes were often more severe than would be expected from the actual injury. It was generally considered that this was due to the toxic effect on the tissues of oil liberated from damaged oil vesicles situated in the rind. It was doubtful if small insects punctured the oil cells, since the oil was toxic to them.

TUNG OIL TREES.

A Large Scale Plantation to be Established.

In consequence of the very satisfactory results attending its pioneer plantation, Queensland Forests Ltd. is now in process of creating a large scale Tung Oil plantation in order to take full advantage of the demand for this very useful commodity.

Tung Oil is a vital necessity to manufacturers of varnishes, paints, enamels, lacquers, ducos, dryers, printers' inks, and as a top-dressing and water-proofing for linoleums, oilcloth, leather, brakebands, all fabrics, papers, metals, cement, tiling, electrical wiring, insulating compounds, and for hundreds of other uses.

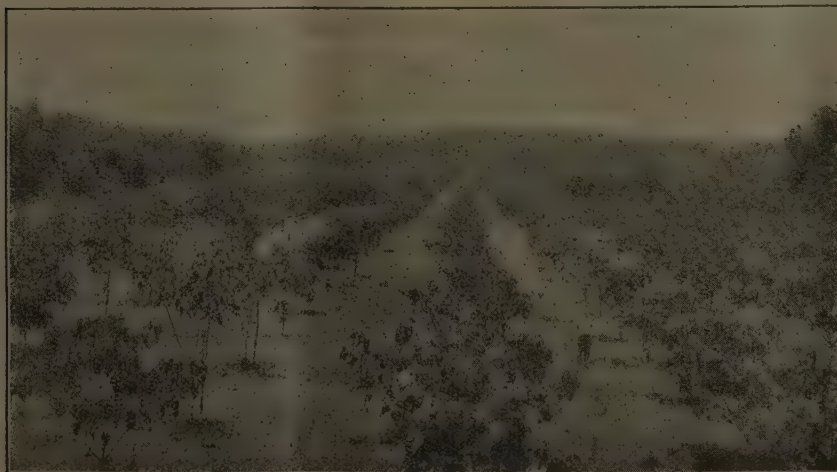
Experience in U.S.A. and in North Queensland has shown that the growing of Tung Oil is well adapted to mass production in large units, or plantations, thus keeping the cost of production to a minimum.

The cost of harvesting is small, as the fruit falls to the ground when ripe. The fruit does not spoil and may lie on the ground for two months without gathering. The nuts before crushing and the oil after extraction may be stored for an indefinite period. The oil is superior to linseed, will take its place when supplies are available, and will give consumers a better product.

The trees are remarkably free of insect pests and disease, and crops are assured each year.



Tung Oil Nuts.



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Plantation in Queensland.

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Fruit Tree Planting.

Apples, Pears, Peaches, Plums, Cherries, Apricots,
Berries, Nuts.

Varieties for Local and Export Markets.

GROWERS ARE NOW THINKING of the trees to plant in the coming season. The following notes will be found to be helpful:—

Apples.—Generally speaking, varieties which export well are good for all markets, because of their recognised good qualities, so should show predominance in plantings for the future, because (1) the fruit has a wider field of sale; (2) the outside varieties are narrowed to only one field of disposal—the local market, and when that fails these varieties have no buyers.

Export Varieties.—Willie Sharp (the outstanding variety for early exports: remarkable for its likeness to Cleopatra, but without the bitter pit failing. An early and heavy bearing variety); Alfriston, Reinette du Canada, Jonathan, Dunns, Stayman Winesap, Cleopatra, London Pippin, Delicious, Red Delicious, Rome Beauty, Statesman, Red Statesman, Rokewood, Yapeen, Granny Smith, Sturmer; and, where suitable, Stone Pippin.

Other varieties which have export qualities and bearing capacity are Geeveston Fanny, Desert Gold, Delco, Paragon, Widdup.

For interstate trade, in addition to those above mentioned, may be included Gravenstein, Red Gravenstein, Yates.

For local trade, for adjacent market and household requirements a limited number from the following can be selected:—Beauty of Bath, Cox's Orange Pippin, Charles Ross, Crown Beauty, Devonshire Quarrenden, Emperor Quarrenden, Grime's Golden, Irish Peach, King David, Lady Carrington, Laxton's Superb, Lord Suffield, Lord Nelson, Newman's Seedling, Pommé de Neige, Peasgood Nonsuch, Williams' Favorite, Wilson's Red June, Winter Banana.

Pears.—Many times we have been asked which is the best quality Pear? Our selection is "Twylford Monarch," though in any export selection its name is omitted because of its unattractive appearance, and not being known generally to the buying public, but once tasted it is always enquired for.

Export varieties suitable for local and export trade:—Beurre Clairgeau, B. Bosc, B. d'Anjou, Doyenne du Comice, Glou Morceau, Howell, Josephine, Packham's Triumph, P. Barry, Winter Nelis, Winter Cole, W.B.C. (under special conditions).

In addition to those for export and interstate trade, these are suitable for local and household requirements:—Clapp's Favorite, Beacon, Twylford Monarch, Winter Bartlett, Vicar of Winkfield.

English Plums may be divided into four headings—under each being most suitable for the purpose are the following selection:—

Jam.—Angelina Burdett, Diamond, Early Orleans, Jefferson, Green Gage, President, Prunes (all varieties), Purple Gage, Yellow Gage, Grand Duke, Cherry Plum, Damsons, Evans' Early.

Canning.—Cherry Plums, Jefferson, Pond's Seedling, Angelina Burdett, Coe's Golden Drop, Early Orleans, Rivers' Early Prolific, Yellow Egg.

Drying.—Angelina Burdett, Coe's Golden Drop, Prune de Agen, Prune Splendour, Prune Robe de Sergeant.

Dessert.—Early Orleans, Jefferson, Green Gage, Prune Splendour, Prune Giant, Victoria.

Japanese Plums, because of their early and heavy bearing, have proved that they are indeed a profitable investment. Many of the newer varieties are a great improvement on those planted 15 to 20 years ago. A block of Japanese Plums helps to augment the bank funds when returns in other lines are yet to come in.

Varieties which do well over a large area are:—Alpha, Billington, Burbank, Climax, Formosa, Narrabeen, October Purple, Santa Rosa, Shipper, Shiro, Satsuma, Wickson, Wilson.

Varieties which are excellent carriers for journeys of several hundred miles and overseas export are:—Ballena, Shipper, Satsuma.

Peaches.—These may be classified into two distinct classes—(1) the canning, and (2) the fresh fruit varieties.

The canning list is indeed a limited one to the following—and, fortunately for the industry, these varieties are grown in the principal canning areas, viz., the Goulburn Valley and the Murrumbidgee irrigation areas:—Golden Queen, Phillip's Cling, Pullar's Cling, Peak Cling, Thiele's Cling, Healesville Cling.

Fresh fruit trade may be said to be confined to freestone varieties, from which also are those used for drying purposes in the Mildura, Horsham, and Murray Valley districts in South Australia.

Whitefleshed varieties, early to late fruiting:—Sneed, Mayflower, La Vainqueur, Aunt Becky, Alton, Brigg's Red May, High's Early Canada, Carman, Catherine Ann, Hale's Early, Hooker, Irelands, Lippiatt's Late Red, Lorimer, Millicent, Noonan's Peregrine, Pickering, Smith's Seedling, Sweet Seventeen, Thomas Rivers, Watt's Early, Webbs, Wiggins.

Yellow-fleshed freestone varieties:—Triumph, Early Crawford, Elberta (also drying purposes), J. H. Hale, Lady Palmerston, Late Crawford, Stark's Early Elberta, Salway, Krummell October.

Yellow-fleshed clingstone varieties which are of value to the planter because of lateness of ripening and their good size:—McDevitt's Late Cling, St. John's Late Cling.

Apricots will always be popular with the buying public, although there will be short periods when full supplies of fruit are available when growers, by judicious advertising a little ahead of the season, could assist in disposing of the crop satisfactorily for that year.

Every soil is not suitable for the Apricot, and heavy crops are generally obtained in well-drained black soils and where loam appears over gravel about 9 to 12 inches in depth.

All varieties make good jam and are bought by factories at contract rates.

Apricots for Canning.—Tilton, Trevatt, Shipley. **Drying.**—Newcastle, Oullin's Early, Moorpark, St. Ambrose.

Dessert.—Newcastle, Oullin's Early, Butler, Early Moorpark, Helmskirke, Mansfield Seedling, Salmon, Campbellfield.

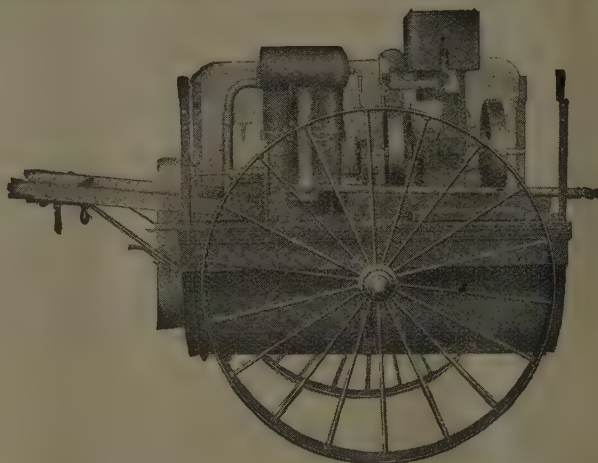
Cherries.—The Cherry districts are so divided that competition is practically eliminated, one district being finished its crop before the others are ready. The main areas in Australia are Young, Armidale, Orange, in N.S.W.; Burwood and Red Hill, in Victoria.

By judicious selection in growing the best varieties, the season for Cherries may be lengthened by a few weeks, and with the advent of lower cool storage temperatures one successful shipment has been made to the East, with very gratifying results to the grower.

The canning factories are interested to the extent that growers have already planted areas to cater for contracts already made.

The Most Talked Of Spray Cart in Australia To-day.

The "BUZACOTT" 469 Portable ORCHARD SPRAYER



A Striking Example of the "Buzacott" Big "4" Portable Outfits.

**There is an abundance of evidence to show that the
"Buzacott" Big "4" is the Spray Cart
Sensation of 1933.**

HERE'S THE REASON

The Manufacturers have Strengthened, Improved and Refined these Outfits so as to meet the most difficult Spraying Operations—to give you Abundance of Pressure, Larger Volume, Longer Life, Trouble Free and Economical Running, Reduced Spraying Costs.

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Another field for exploitation is the candied Cherry used in the confectionery trade and for a cake ingredient. When Cherries realise 18/- to £1 per case the matter of planting is worthy of consideration.

Varieties.—Bedford Prolific, Black Republican, Bigarreau Montreux de Megel, Bigarreau Napoleon (or Royal Ann), Burgsdorff's Seedling, Eagle Seedling, Early Lyons, Early Purple Gean, Florence, Precoc de Boppard, St. Margaret, Werder's Early Black.

Oranges, Lemons, Grapefruit, and Mandarins may be confined to the main varieties, outside varieties bringing shillings less per case, and so do not bring in the return per tree and per acre.

Oranges.—Washington Navel, Valencia Late.

Lemons.—Eureka, Lisbon.

Mandarins.—Emperor.

Grapefruit.—Marshes Seedless, Triumph.

Berry Fruits.

Strawberries.—Melba, Sunbeam, Wilson's Wonder.

Raspberries.—Cool highland districts with deep soil gullies, together with a good local trade, mean good profits from a small area. **Varieties.**—Northumberland Fillbasket, Lloyd George, Perfection.

Loganberries, like Raspberries, return good profits from small area. **Varieties.**—Black Logans (if allowed to spread may become a menace), Red Logans.

Currants.—With contracts from factories or local trade, these form a source of income to the small man with a family to help in the harvest. **Varieties.**—Carter's Black Champion; (black) Lee's Prolific, Black Naples; (red) La Versailles; (white) White Dutch, White Imperial.

Vines are classified into three groups—drying, dessert fresh fruit and wine-making.

The drying varieties are grown mainly in the Murray

The "Lightning" is the ONLY Fruit Grader used in the Harcourt District



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HARCOURT
SHED HAS
ALREADY
PACKED
JUST ON
100,000
CASES WITH
20,000
TO
30,000
MORE TO
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BOTH
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ARE
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LIGHTNING
MODEL 24.

The illustrated Lightning Model 24, driven by 1½ Horse Power Petrol Engine graded the following during this heavy season:—

2,210 bushel cases were packed in one day of 11 hours.

1,750 bushel cases were packed off it in 8 hours.

1,600 odd cases were packed almost every day.

350 cases Rome Beauty put through Grader packed and stacked in 1½ hours.

Between 1,000 and 2,000 cases daily have been packed off for the whole of the season. For the last 8 days, average 2,150 cases without a stoppage.

For 2 weeks both machines were working continuously day and night, without stopping except meal times.

This proves "Lightning" is dependable in times of urgent necessity for loading boats.

No breakdowns, no loss of time, proving the adaptability of the "Lightning" to suit circumstances.

"LIGHTNING" Machines are used SOLELY in this, our largest Victorian Apple District.

The "Lightning" Fruit Grader Co.

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Valley, with its aid of irrigation and sunny drying weather; whilst fresh dessert varieties cover a wider range, and are grown practically in all districts with a temperature not lower than 60 to 100 degrees even heat.

Special varieties are used for each purpose, and those for wine-growing being usually propagated in the district of origin.

Drying Varieties.—Sultana (seedless), Zante (Currants), Raisin de Dames, Gordo Blanco.

Fresh Dessert Varieties.—Waltham Cross, Gordo Blanco, Black Hamburg, Doradillo, West's Black St. Peter, Lady's Finger.

Nut Culture.—A good opportunity for profitable investment and quick returns—that is, 5 to 6 years for Walnuts, 5 years for Almonds, is assured. Almonds require a well-drained soil, fairly free from frosts. Varieties which have proved profitable when attention has been given to correct pollinisation are:—Brandes Jordan, Burbank, Chellaston, Early Jordan, Golden State, Hatches Nonpareil, I.X.I., Peerless, Grosse Tendre, Ne Plus. Ultra, Nonpareil, Paper Shell.

Walnuts.—Planted in cool climates soon return the planter handsome profits. Varieties.—English: Wilson's Wonder, Franquette, Kelvin, Freshford Gem.

Macadamia, the Australian Nut. Planted in Northern areas, its value is now proved. America realised the value of this nut some years ago and planted thousands of acres.—(Notes by John Brunning & Sons, Somerville, Vic.)

CROSS-POLLINATION OF PEARS.

Experiments with Williams.

OBSERVATIONS by officers of the Plant Breeding and Fruit Branches of the N.S.W. Department of Agriculture on the pollination of the well-known variety Williams or Bartlett Pear are the subject of interesting reference in a recent report of the Director of Plant Breeding.

All the results furnished support the conclusion formed last year that Williams is more self-fruitleful than Packham's Triumph, but that the fruits formed as the result of self-pollination are mainly seedless or parthenocarpic (i.e., develop without fertilisation), states the report.

Despite the fact that a large number of seedless fruits are set every year, cross-pollination with any of the varieties used increased the number of fruits set from two to four times. The seedless fruits are usually smaller and more irregularly shaped, and even where a satisfactory setting of these seedless fruits is obtained a large percentage is undersized and unfit for market. The varietal power of producing large numbers of seedless fruits (more in some seasons than in others) often masks the necessity for cross-pollination. Not only are these seedless or partly seedless fruits of less saleable size, but they also have poorer keeping qualities, poorer shape, and a greater percentage of stone cells than those which are successfully cross-pollinated.

This summary of the investigations is regarded as of much significance to orchardists, especially on account of the views expressed recently by a leading orchardist that the value of cross-pollination is much over-estimated. It has been found that even in years which are most favorable for the setting of seedless fruits efficient cross-pollination markedly increases the fruit set. Such fruit has a good percentage of seeds and also shows less tendency to drop. A large number of commercial varieties have been found to be very successful in pollinating Williams.

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Fruit cases can be double wire strapped for less than one penny per case—a penny well spent for safe transport.

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Correspondence Invited from Growers and Packers of Best Fruit.

POLLINATION IN RELATION TO FRUIT TREE PLANTING.

Apples, Pears, Plums, Cherries and Stone Fruits.

THE PLANTING OF DECIDUOUS fruit trees is now occupying the thoughts of growers.

When planting trees the question of interpollination is one which should receive adequate consideration.

In response to an enquiry regarding the process of fertilisation, Mr. A. G. Strickland, M.Ag.Sc., Horticultural Research Officer, Victorian Department of Agriculture, writes as follows:—

In most blossoms the stigma of the female organ secretes a sticky fluid which helps to keep pollen grains attached to the stigmatic surface. This sticky fluid also stimulates the pollen grain to germinate—just as it will germinate on a sugar jelly or sugar solution. The germination of the pollen grain results in the passage of a germ tube down the pistil to the ovules. This germ tube is exceedingly small, and is able to push its way between the cells of the apparently solid style. The germ tube of the pollen grain having entered the micropyle of the ovule, the contents of the pollen grain are transferred, via the tube, to the ovule. Here, fertilisation takes place and the seed of a new individual, compound of the parents, is conceived.

Recently in an article published in the "Journal of Agriculture," Mr. Strickland dealt with the "Pollination of Fruit Trees," in the course of which he stated as follows:—

Flower Structure.

Fruit is most often accompanied by seed, and the production of seed is essentially a sexual process. Blossoms are provided with male and female sexual organs, and in the perfect flower both types of organ are present in the one blossom. The male organs, or stamens, have as their function the production of large numbers of tiny pollen grains, which are shed when ripe. The female organ or pistil consists of a seed case at the base of the flower, containing bodies which will later develop into seeds if fertilised in the normal manner. These bodies are called ovules, and are really immature egg cells. This seed case is surmounted by a long stem, bearing at the

top a sticky bulb or stigma; the function of this sticky stigma is to pick up pollen grains which may fall on it, or which may be brought to the flower by bees and other insects. When a pollen grain lodges on the stigma, it is stimulated to send out a fine tube which grows down the stem of the stigma, and, conditions being favorable, eventually reaches the bodies in the seed case, with which bodies the contents of the pollen grain fuse. This process is termed fertilisation, and is the final step in enabling the ovules in the seed case to ripen into viable seeds.

When fertilisation has taken place, swelling of the flower parts immediately commences—in other words, the fruit has "set"; but should fertilisation not take place within a certain period, the flower drops off the tree, and no fruit is formed.

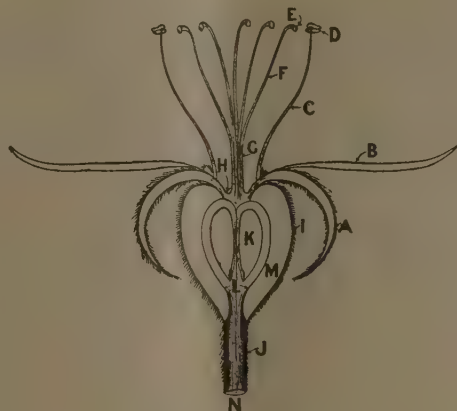


Diagram of longitudinal section of Apple flower.

A, The sepal; B, the petal; C, the stamen; D, the anther; E, the stigma; F, the style; G, union of the pistil divisions; H, the nectary; I, the rind; J, the stem; K, the ovule; L, the ovary; M, the fleshy part, and N. point of union with the parent twig.

FRUIT TREES

ONE GROWER SAYS—

"The trees (750) arrived in excellent order and are of exceptional quality. Our local inspector said they were the best trees he had seen. You will get my order, about same number, for next year."

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The term pollination describes the application of pollen to the stigma, but in order to obtain fruit, the further process of fertilisation is also necessary.

A flower may be fertilised by its own pollen, or pollen from another flower of the same variety, in which case it is said to be self-fertilised. When it is fertilised by pollen from flowers of a different variety it is cross-fertilised. Some fruits will set fruit when self-fertilised, and these are termed self-fruitful; others, which must be cross-fertilised in order to set fruit, are in the self-unfruitful class. This latter is the class with which the orchardist is most concerned.

Some fruit varieties are fully self-fruitful, and may be grown in solid blocks without reduction in yield, e.g., Peaches and Apricots.

Most varieties are fully or partially self-unfruitful, and must be planted in mixed blocks in order to get maximum crops, e.g., Apples, Pears, and Plums.

Some varieties are cross-incompatible with other varieties, and therefore of no use for inter-planting with the varieties with which they happen to be incompatible.

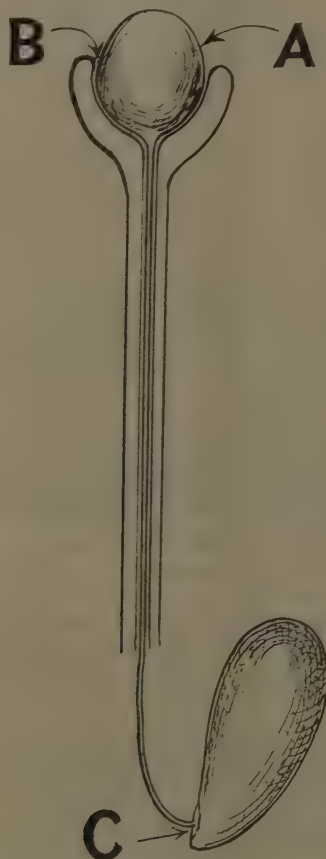


Diagram showing action of pollen grain during the process of fertilisation (highly enlarged). A, pollen grain; B, stigma; C, ovule.

FRUIT TREES

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WITH A FINE RANGE OF FRUIT TREES.

Prime quality Trees now available. Every Tree is guaranteed perfectly clean, healthy, free from insect pests, true to name, and should prove a prolific bearer of finest fruit.

In order to meet the times, Goodman's price per 100 for all Deciduous Trees except Cherries is now

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Per 100**

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All Best Commercial Varieties for Every Purpose.

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APRICOTS

On Apricot and Plum Stock.

CHERRIES

PEACHES

NECTARINES

PEARS

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PLUMS

QUINCES

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WALNUTS

JAPANESE PLUMS

And all other varieties, including:—

PERSIMMONS, PASSION FRUIT, GRAPE VINES, CURRANTS, GOOSEBERRIES, RASPBERRIES, STRAWBERRIES, RHUBARB, MULBERRIES, and — MISCELLANEOUS FRUITS, CHESTNUTS, — FILBERTS, LEMONS, ORANGES, Etc. —

We also carry excellent stocks of HEDGE PLANTS, ORNAMENTAL TREES AND SHRUBS.

1933 CATALOGUE JUST ISSUED.

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Furthermore, some varieties (such as Gravensteins) will not produce good pollen and should not be used as pollenisers.

We will now deal briefly with the various fruits, indicating, as far as possible, their pollination requirements:—

Apples.—Nearly all varieties of Apples are partially or completely self-unfruitful, and it is generally admitted that no single variety can be advantageously planted alone. It may be held that in certain seasons and under certain local conditions, Jonathan, London Pippin, and others may set good crops without the aid of cross-pollination; the reason for all discrepancies is not known, but the fact remains that better and more regular crops will result if such varieties are interplanted. Work in every part of the world has shown that there are no decided cases of cross-unfruitfulness in Apples. This means that with the exception of varieties which produce poor pollen (such as Gravenstein) most Apple varieties which bloom together will interpollinate each other satisfactorily. Notable varieties with poor pollen are Gravenstein, Rhode Island Greening, Baldwin, and, possibly, Tasma and Reinette du Canada. After a further season's work other varieties may be found to produce weak pollen. The weakness of Gravenstein pollen is borne out in practice, and Gravenstein is a notoriously poor polleniser. In the few cases where it has proved satisfactory, this may be put down to conditions favorable for bee activity, and the abundant transfer of pollen. Under such conditions each stigma would be loaded with pollen grains, one or more of which may be capable of germinating. There are few seasons, however, that such ideal conditions are experienced, and on the whole Gravenstein is useless as a polleniser.

It may be said generally that so far as Apples are concerned, varieties which produce good pollen, and which bloom at the same time, are suitable for interplanting.

Pears.—Many varieties of Pears are planted on the assumption that they are self-fruitful, but it must be remembered that self-fruitfulness varies with the season, district, and climate, and that no hard and fast separation of self-fruitful from self-unfruitful varieties is possible.

As an instance, we have the case of Williams Bon Chretien Pear already referred to. This variety seems to be self-fruitful in the Goulburn Valley, and self-unfruitful in southern districts generally. In the south, Williams should be interplanted with Winter Nelis, Beurre Bosc, or Doyenne du Comice. In northern districts Williams is capable of setting seedless fruits without fertilisation as well as fruits from self-pollination.

Keiffer is reported as self-unfruitful in some parts of the United States of America, and such is our experience in Victoria. Kieffer should be pollinated with Howell.

Many other Pear varieties are partially self-unfruitful, and should be interplanted with varieties blossoming simultaneously.

No Australian data on pollen vitality is available for Pears, but work in other countries seems to show that Beurre Clairgeau is not particularly good in this respect.

Plums (Japanese).—Many varieties of Japanese Plums are self-unfruitful, and should not be planted in solid blocks. Included in the list of self-unfruitful varieties we have Abundance, Satsuma, Burbank, Wickson, Kelsey, Formosa, and Gaviota. Climax, however, is in many cases self-fruitful. Practically all Japanese Plums are cross-fruitful, and may be interplanted for pollination purposes with the exception of Formosa and Gaviota. These two latter varieties are intersterile, and should not be planted together.

European Plums.—Several varieties of European Plums are self-unfruitful, and require interplanting, e.g., Clyman, Tragedy, Grand Duke, Golden Drop, President, Robe de Sergeant, etc. Prune d'Agen, Sugar, etc., are self-fertile, and set quite well without interpollination. Most European Plums are suitable for inter-pollination, provided that they flower simultaneously. As a general rule, Japanese Plums do not cross-pollinate with the European type, although in the United States of America Burbank has set well when pollinated with the European variety Reine Claude du Bavay. Golden Drop and Jefferson have been proved cross-unfruitful in England.

Cherries.—The important sour Cherries, English Morello, Montmorency, and Early Richmond, are self-fruitful, but may benefit slightly from interplanting. All sweet Cherries, Black Tartarian, Early Purple, Florence, etc., are self-unfruitful, and require interplanting. Bing, Lambert, and Napoleon are also inter-sterile, and will not pollinate each other.

Stone Fruits.—With few exceptions, Peach and Apricot varieties are self-fruitful, and satisfactory crops are obtained without interplanting. In the United States of America there are two notable exceptions—J. H. Hales and June Elberta Peach, which set no fruit without cross-fertilisation. These two varieties are pollen sterile, and are useless as pollenisers for other varieties, as well as being themselves self-fruitless. All varieties of Apricots are sufficiently self-fruitful to set good crops.

Most varieties of Almonds are self-unfruitful and need pollenisers. In the pollen germination tests this season, Brande's Jordan was shown to have very weak pollen, indicating that it is of no value as a pollinating variety.

Provision of Pollenisers.

It has been shown that many of our Apples and Pears. Plums, Almonds, and Cherries are partially self-unfruitful or wholly so, and require inter-pollenisers.

The general recommendation in regard to interplanting

Fruit Trees of Outstanding Quality

True to name, healthy and well-rooted. Citrus trees in large quantity—
Budding Wood supplied by the Bud Selection Society of N.S.W.—
Worked on Lemon, Sweet Orange, and Trifoliata Stock.

CATALOGUE FREE ON APPLICATION.

ESTABLISHED 1901.

L. P. ROSEN & SON, Fernhill Nurseries

Pennant Hills Road, CARLINGFORD, New South Wales

is to have no tree more than two trees distant from the desired pollinating variety. Two solid rows and then either one or two rows of the polleniser is a satisfactory lay-out. If mixed planting is not an objection, every third tree in every third row will provide nearby pollinisers.

Where there is insufficient provision for inter-pollination in an established orchard, pollinating varieties may be grafted on limbs of trees at suitable intervals through the orchard, or whole trees may be grafted over. Grafts should be inserted fairly high up on the limbs of old trees, as if they are inserted too low a large cut surface, which may not heal well, is exposed. If the grafts are pruned lightly each year, plentiful blossom should be available in a few years.

As a temporary expedient and to tide over the period before the grafted trees provide blossoms, fair-sized

branches with flowers of the desired pollinating varieties should be placed in petrol tins of water at suitable intervals through the orchard. These will do service for about one week and should be replaced periodically during the flowering period.

The most important points may be summarised as follow:—

1. In planting orchards of Apples, Pears, Plums, Cherries, Almonds, etc., choose two or more varieties that flower at the same time, avoiding, however, varieties which are not compatible with each other.

2. Where trees of one variety are in a solid block and are not fully productive, interplant or graft another variety, in order to provide adequate pollination facilities.

3. If there is evidence of scarcity of bees to act as pollen carriers from tree to tree, make arrangements for the distribution of hives in the orchard during the blooming period.

CANNED FRUITS.

A record quantity of canned fruit has been packed in Australia this season. The Canned Fruits Control Board is using every endeavor to develop the export market to the full.

CANNED FRUIT EXPORT FOR 1933.

Up to March 31, 1933, a total of 110,897 doz. 30 oz. tins and 6,293 doz. 16 oz. tins have been exported. The bulk went to U.K., with substantial quantities to New Zealand and the Near East.

A N.S.W. NURSERY.

Messrs. L. P. Rosen & Son have a 52-acre nursery at Carlingford, N.S.W., the present manager being Mr. J. W. E. Larsen. Citrus and deciduous fruits are specialised, high quality stock being offered to growers. Catalogue available on request.

Citrus Growers — Of Interest to You !

AUSTRALIA'S NEW OIL CROP—GROW TUNG OIL TREES FOR PROFIT.

A valuable sideline, and a most profitable one, is the planting of TUNG OIL TREES. Tung Oil tree culture is destined to become one of Australia's outstanding horticultural industries. Tung trees will grow wherever Citrus will flourish.

Supplies of Multi-Cluster Type Heavy Bearing Florida Tung Oil Tree Seed produced from mature plantations.

For Sale by **Queensland Forests Limited,** UNION BUILDING, 8 BOND STREET, SYDNEY

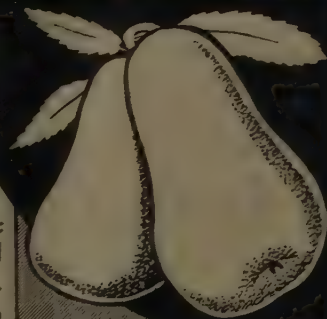
(Owners of the only seed bearing Tung Tree Groves in Australia, and sole distributors of this high class type of seed.)

Write for free descriptive circular.

SHELL

Order your supplies for the dormant season NOW. Ample stocks of Shell Redspray and Shellicide D available.

THE SHELL COMPANY LIMITED



SPRAYING OILS

SOME REASONS WHY... Sulphate of Ammonia

IS NOW USED SO EXTENSIVELY
BY ALL FRUITGROWERS

1. Sulphate of ammonia is the cheapest form of nitrogen.
2. Sulphate of ammonia restores plant vitality lost in heavy cropping.
3. Sulphate of ammonia produces greater growth to bear more fruit.
4. Sulphate of ammonia increases the size of fruit shoots and buds.
5. Sulphate of ammonia assists fruit setting.
6. Sulphate of ammonia aids the decomposition of green manure.
7. Sulphate of ammonia is ideal for mixing with superphosphate.
8. Sulphate of ammonia applied a few weeks prior to blossoming gives up all its Nitrogen in a readily available form, just at the critical period.

Recommendations for the use of Sulphate of Ammonia in balance with Super and Potash, for all Fruit Crops, may be obtained from your Agent, your Manure Company, or from us.

WRITE TO:—

ADVISORY OFFICER

Nitrogen Fertilisers

Proprietary Limited

360 COLLINS STREET, MELBOURNE, C.1.

APPLE WASHING MACHINE.

To cope with the demand for an efficient machine for washing Apples in order to remove spray marks, Mr. D. Harvey, orchard implement maker, of Box Hill, Melbourne, has designed and manufactured suitable equipment, believed to be the first of its kind in Australia.

The machine is simplicity in itself, as the fruit is not handled once it is put on the conveyors: two electric motors control the machine. The Apples are taken from the cases and placed on the roller conveyors, where the fruit, after being sorted, is carried along to the acid bath which is enclosed. After passing through the rinser, the fruit is sprayed with water, making it impossible for any acid to remain on the fruit. The rollers carry the fruit along to the electric drier right on to the grading machine.

Fresh water is replenished continuously.

NEW ZEALAND EMBARGO.

While confidence was recently expressed that the New Zealand embargo against importation of Australian citrus would be lifted for the coming season, there does not at the moment seem much prospect of this desirable event. Terms of the proposed trade agreement have to be submitted to both Parliaments before publication. No decision can be expected from New Zealand before August, and in the meantime the embargo will remain.

This is most regrettable, and it is a serious blow to the Australian citrus industry.

AUSTRALIAN FRUIT EXPORT.

The Commonwealth Commerce Department advises that up to April 25, 3,195,291 cases of Apples have been shipped from Australia this season, also 371,934 cases of Pears—a total of 3,567,225 cases, including fruit for all export destinations. Details from the several States are as follows:—N.S.W. (to April 1), Apples 191,354, Pears 30,549; Victoria (to April 21), Apples 1,021,283, Pears 291,478; Queensland (to April 25), Apples 17,716, Pears 117; S. Aust. (to April 23), Apples 197,500, Pears 13,659; W.A. (to April 17), Apples 318,792, Pears 36,131; Tasmania (to April 15), Apples 1,448,646.

CANNED TOMATOES POPULAR.

Also Tomato Juice.

In America, canned Tomatoes are so popular that the supply does not equal the demand. America imported from Italy last year, nearly 35,000 tons of canned Tomatoes. Production and canning in Italy have become highly profitable industries. In the U.S.A. Tomato paste is very popular and Italy supplied America also with 5,000 tons. Large quantities of Tomatoes are being made into a beverage and the demand for Tomatoes has increased production and processing.

Tomato juice has been found helpful for slimming, and in Australia the canned pure juice is on the market, and is a very palatable beverage.

Germans Like Tomato Juice.

In 1931 American Tomato juice was first introduced into Germany, and the demand is rapidly increasing and is evidently acceptable to the German palate. It is very popular, particularly among women, and is largely consumed by invalids and children.

FOUNDER OF SHEPPARTON CANNERY.

One of the founders of the Shepparton Cannery was Mr. Zachariah Akers, a fruitgrower of Orrvale, near Shepparton. Mr. Akers was born near Geelong in 1860, and came to the Shepparton district in 1912. Thoughts of establishing a cannery at Shepparton came to a head when he gathered together a number of orchardists at his home in Orrvale in 1917, and as a result of that meeting, the cannery was established. Mr. Akers became managing director of the first company, and continued in

that capacity for five years. The company commenced with a capital of £24,000 in £1 shares, and growers were paid £5 per ton for their fruit. Last year the cannery paid growers £15 per ton for canning fruit.

Assistance had to be obtained from the Government to carry on the industry, and at one time it looked probable that the cannery would have to close its doors. This happened when Sir William McPherson was Treasurer of the Victorian Government. He visited Shepparton and came to the conclusion that the cannery was not a paying proposition. His threatened withdrawal of Government support was communicated to Mr. W. Cattaneach, Chairman of the State Rivers and Water Supply Commission, and the latter had a lengthy interview with the Treasurer, with the result that Government support was continued. The wisdom of that decision is reflected in the sound position of the cannery to-day. All its debts have been paid, and it now has a reserve fund of £120,000.

Of the nine directors of the first company, only three remain on the board to-day. They are Messrs. Z. Akers, D. J. O'Dea, and T. H. Ray. These men, in conjunction with Messrs. A. W. Fairley and E. G. Simpson, are the present members of the directorate.

"How does it happen," asked the teacher of the new scholar, "that your name is Allen and your mother's name is Brown?"

"Well," replied the boy, after a moment's thought, "you see, it's this way: she married again and I didn't."

The doctor's little daughter had strayed into his surgery, and was watching, wide-eyed, as he tested the heart and lungs of a patient. Suddenly she spoke:

"Getting any new stations, daddy?"

VALUABLE TRADE PUBLICITY.

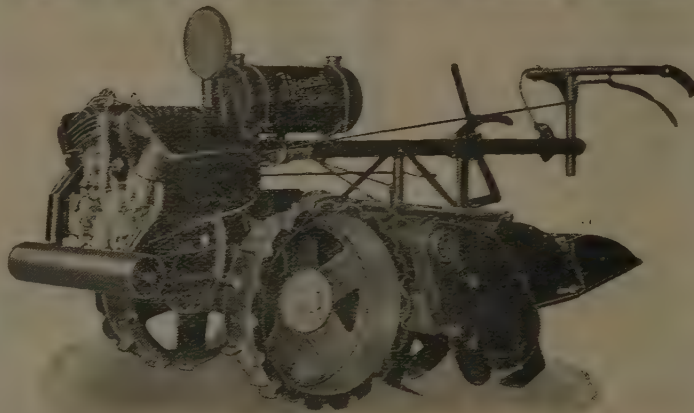
The Australian Overseas Trade Publicity Committee under the chairmanship of Mr. A. F. Bell, Melbourne, is doing very valuable work in increasing the sale of Australian primary products in British markets. The industries represented in this organisation are—Dried Fruits Export Control Board, Canned Fruits Export Control Board, Dairy Produce Export Board, Apple and Pear Export Council and Egg Exporters. The London representative is Mr. A. E. Hyland, whose services are highly esteemed.

BIG DRIED FRUIT CROP.

An exceptionally heavy crop of dried fruits has been processed in Australia this season. The quality is excellent. Vigorous efforts are being made by the Dried Fruits Control Board to develop export markets.

Queensland Fruit in Melbourne.—The Melbourne representative of the Committee of Direction of Fruit Marketing (Mr. A. V. Wilson) reports that 39,658 cases of fruit were received in Melbourne from Queensland from March 25 to April 25. Of this quantity, 25,523 cases were Bananas and 13,046 cases Pineapples.

Maximum Results at a Minimum Cost by using THE HOWARD ROTARY HOE



HOWARD ROTARY HOE "EIGHT," the ideal machine for Orchard Cultivation. Cuts 3ft. wide and up to 9 inches deep. May be equipped with Power Spray, fertiliser distributor, furrowing attachment, saw-bench, and many other useful attachments.

Models of the Howard Rotary Hoe are supplied for all classes of work.

For further particulars ring or write the Manufacturers—

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NORTHMEAD - SYDNEY - Phone UW 8984

Poultry Notes.

VALUE OF GREEN FEED.

"Amateur" (Bentleigh) writes:—

Ques. 1.—Are cabbage and cauliflower leaves of any use in food value, no other greens being available?

Ans. 1.—Fresh cabbage and cauliflower leaves are of value as green feeds for poultry, and, chopped fine, can be either mixed in the morning mash or fed at midday. If used in the mash, from 20 per cent. to 25 per cent. can be included.

Ques. 2.—Which has the greater amount of food value of the two?

Ans. 2.—Both are equally valuable for their mineral content and for adding to a properly balanced mash.

Ques. 3.—Would they increase egg production to any extent?

Ans. 3.—The use of succulent green feeds both in the mash and fed at midday have a beneficial effect upon the health and consequently upon egg production.

Ques. 4.—Would Lupol be better than these leaves, and what quantity would you have to mix with a wet mash for 12 Blacks?

Ans. 4.—Lupol of good quality is a valuable substitute for green feed, but if cabbage and cauliflower leaves are included regularly in the mash, it would not be necessary to use much Lupol, if any. If the leaves are fed at midday only, then up to 5 per cent. of Lupol could be used in the morning mash. It is chiefly a matter of which is available at the cheapest price. Feed 2oz. of mash per bird.

Ques. 5.—Is oil cake of any value as regards fattening of cockerels, and, if so, what quantity is it advisable to use?

Ans. 5.—Yes, the quantity of oil cake to be used should be made up in a ration as follows:—For 12 birds, 2 quarts pollard, 1 quart bran, 1 lb. oil cake. Oil cake is procurable from Lever Bros., 565 Flinders-lane, Melbourne, and further information is obtainable from them.

FEEDING RATIIONS.

"C.C." (Wilmington, S.A.), writes:

Ques. 1.—Would the following be a suitable ration, both for wet or dry mash:—Bran 1 part, pollard 2, meat-meal 5 per cent. Unfortunately at present, owing to lack of water, I can only supply green feed to the fowls in winter months, but in the near future hope to put down a bore.

Ans.—Yes. Your ration would be suitable, provided that a regular supply of green stuff is made available and this must either be added to the mash or fed at midday. In the summer months, when, as you state, green feed is not available, lucerne chaff or Lupol must be added to the morning mash. If using Lupol, add from 10 to 15 per cent. to your present mash. The addition of a little crushed charcoal to the mash will be found beneficial.

Ques. 2.—Could you also give me a balanced ration for crushed wheat for use instead of bran and pollard?

Ans. 2.—A good mash can be made up by measure as follows:—Wheat meal 4, bran 4, meat meal $\frac{1}{2}$, with 10 per cent. of Lupol added. In the winter when succulent

greens are available, finely chopped lucerne, cabbage, chou mollier, maize or other varieties of green feed can be added to the mash, increasing the bulk by even as much as 25 or 30 per cent. Some breeders use even more green stuff, and at no time should the birds be without it in some form.

TREE BANDING SUCCESSFUL.

EXCELLENT RESULTS are being obtained by using chemically treated bands. These bands are of corrugated cardboard treated with chemicals which are put on the trees in the spring after the loose bark has been removed and with no further effort on the part of the grower. They automatically catch and kill large numbers of the worms that crawl down the trees looking for places to spin cocoons. These bands catch one-third of the worms, thus reducing the number of moths flying in the orchard by that amount. American experience is that the bands are nothing short of "magical." The banding is not expensive, considering the efficiency of the method. The cost of labor will depend on how much scraping is done. Scraping should be thorough, but only the dead bark should be removed. This item will not be very great after the first year. No injury has been noticed to the trees by the use of these bands.

The question often arises whether the chemical in the bands do not repel the worms. As a matter of fact, the contrary seems to be true, the dark color of the bands apparently making them more attractive than untreated bands. In a test made in U.S.A. this season, treated bands were put on the other half, and of about 5,000 worms caught, more were caught in the treated halves than in the untreated halves.

An editor received from a lady some verses daintily tied up with pink ribbon, and entitled, "I Wonder if He'll Miss Me?"

After reading them, he returned the effort to the sender with the following note: "Dear Madam,—If he does, he ought never to be trusted with firearms again."

Friendship is the holiest of gifts;
God can bestow nothing more sacred upon us!
It enhances every joy, mitigates every pain,
Everyone can have a friend,
Who himself knows how to be a friend?

—Tiedge.

RUSSELL & CO.

Specialists in

Pumping Plants, Engines, Etc.

We will be pleased to give advice and details for any suggested pumping scheme.

Manufacturers of

The "Bave-U" Power Sprayer

BOX HILL, E 11, Victoria.

Australian and New Zealand Fruit Trade

Market Notes and News — Prices, etc.

REPRESENTATIVE FIRMS, FRUIT MERCHANTS, AGENTS, REPORTERS.

Advertising in this Journal.
NEW SOUTH WALES.

Sydney:

CITY FRUIT MARKETS.

Associated Growers' Selling Agency Ltd.
Black, H. & Son.
Chilton, F.
Fruiterers' Supply Company.
Griffiths Fruit Supply Ltd.
Greentree, H. J.
Hop Lee & Co. Ltd.
Kennett, F. C.
Lockart, H. C.

VICTORIA.

Melbourne:

Bell, Banson Pty. Ltd., Wholesale Fruit Market.
Cave, F., & Co. Pty. Ltd., Wholesale Fruit Market.
Davis, J., Pty. Ltd., Wholesale Fruit Market.
Frankel, H. & S., Wholesale Fruit Market.
Lister, G., Pty. Ltd., Wholesale Fruit Market.
Millis, A., & Sons, Wholesale Fruit Market.
McLean, N. N., Pty. Ltd.
Mumford, J. G., Wholesale Fruit Market.
Pang & Co. Ltd., H. Louey, Wholesale Fruit Market.
Patrikeos, P. A., Wholesale Fruit Market.
Pitt, A. E.
Producers' Dist. Society, Wholesale Fruit Market.
Ross, J. W., Wholesale Fruit Market.
Sang Goon & Co., Wholesale Fruit Market.
Silbert, Sharp & Davies, Wholesale Fruit Market.
Stott & Sons, T., Wholesale Fruit Market.
Tim Young & Co. Pty. Ltd., Wholesale Fruit Market.
Tong, W. S., Wholesale Fruit Market.
Vear, F. W., Pty. Ltd.
Wade, H. M., & Co., Wholesale Fruit Market.
Wilson, H., Pty. Ltd., Wholesale Fruit Market.
Wing, R. A., & Co., Wholesale Fruit Market.
Wing, Young & Co., Wholesale Fruit Market.
Wolf, G., Wholesale Fruit Market.
Wholesale Fruit Merchants' Assn., J. D. Fraser, Temple Court, 428 Collins Street, Melbourne.
Young, J. H., & Co. Pty., Wholesale Fruit Market.

Brisbane:

Barr, A. S., Fruit Exchange.
Cooksley & Co., Fruit Exchange.
Geeves, H. V., Fruit Exchange.
Robsons Ltd., Fruit Exchange.
Winters, E.

QUEENSLAND.

Hobart:

Eric Burgess Pty. Ltd., 88 Collins Street, Hobart.
E. R. Cottier Pty. Ltd., Temple Place, Macquarie Street.
Jones, H., Co. Ltd., Fruit Exporters.
Peacock, W. D., & Co., Fruit Exporters, and at London.

TASMANIA.

Launceston:

Bender & Co. Pty. Ltd., 100 Elizabeth Street.

Dunedin:

Co-operative Fruitgrowers of Otago Ltd.

NEW ZEALAND.

GREAT BRITAIN.

Walls:

London and North-Eastern Railway, 7 Bridge-street, Sydney, N.S.W.

London:

Lewis, E. H., & Son Ltd., Covent Garden, London.
Margetson & Co. Ltd., Covent Garden, London.
Monro, Geo., Ltd., Covent Garden.
Pask, Cornish & Smart, London.
Port of London (Capt. A. W. Pearse, 10 Bligh St., Sydney).
Poupart, T. J., Ltd., Covent Garden.
Ridley, Houlding & Co., Covent Garden.
White & Son Ltd., London Fruit Exchange, Spitalfields, E.1.

Manchester:

The Port of Manchester Rep., W. J. Wade, 8 Bridge Street, Sydney.

Bremen:

GERMANY.

Fruchthandel, Gesellschaft.

Hamburg:

Asthelmer, P. H., & Son, Fruchthof
Gustav Bey, Hamburg.
Int. Fruit Import Gesellschaft.
Lutten, J. H., & Sohn, Hamburg
Stier, Aug., Fruchthof.
Timm & Gerstenkorn.

SYDNEY MARKET.

Month of April.

Arrivals of fruit during the month were heavy. Demand was good and supplies were absorbed at prices generally above the rates ruling for March. The excessive rain in the early part of the month upset the market for a few days, but with the advent of fine weather values soon recovered.

The only exception to the above was Grapes. Enquiry was not keen, while supplies were heavy. Orange, Muscats being late, came into competition with Cornichons from the M.I.A. and both varieties suffered in consequence.

Apples.—Supplies of local Apples were steady with shipments of Tasmanian fruit increasing each week. Consignments came across also from Victoria. Enquiry was good and prices for all varieties improved slightly during the month.

Choice Jonathans sold well with 2½ in. realising top values.

F. CHILTON

ESTABLISHED 1894

FRUIT COMMISSION AGENT

Licensed under Farm Produce Agents Act

Highest Market Prices

Prompt Returns

Reliable Advice

Registered Address for Telegrams and Cables,
"CHILTONS"

References:—Bank of N.S.W., Haymarket, Sydney
and Growers throughout Australia

CITY FRUIT MARKETS, SYDNEY

Demand for cookers was also keener than last month, New Yorks firming to 6/- for best counts with a few at 7/-.

Granny Smiths were higher, choice lines moving to 9/- for popular sizes.

There was no slackening in exports and some heavy shipments were sent away during the month to overseas markets. The quality generally of the Apples exported from N.S.W. this season has been very good and it is to be hoped that values will hold up in the U.K. and the markets found capable of absorbing the heavier shipments from this State.

Bananas.—Supplies were light during the month as compared with the last few years, and values continued good throughout. Only small shipments of Fijis arrived, and it has now been announced that in view of the excessive charges on Bananas from Fiji no further shipments will be made, pending negotiations for a reduction in the imposts.

As local and Queensland growers were depending on the duty on Fiji Bananas for funds to carry out research work and also an advertising campaign, concern is now felt as to whether the programme laid down will be continued.

Grapes.—Enquiry was only limited, and the wet and cold weather affected sales to a large degree. Supplies were heavy and prices were unsatisfactory for the greater part of the month. A fair quantity of Ohanez were exported to Canada and the East and also the U.K., and sales of this variety were made at satisfactory figures.

Lemons.—Supplies of well-colored fruit were scarce, and prices held up well. Towards the end of the month heavier quantities of new crop Lemons came on the market. These were only half colored, but sold at fair values considering the quality. Demand was steady except during the wet weather, but fell off slightly towards the end of the month. Prices are easing and will come back further as consignments increase.

Oranges.—Supplies of Valencias fell off quickly, while the quality of most lines was only standard. Choice lines sold freely at 14/- in the early part of the month with a few to 16/-, but demand which ceased during the wet spell was not renewed and prices came back. New season Navels and Silettas came to hand before Easter. Most of the fruit was too green and did not find favor with buyers. Navels sold at 5/- to 9/- and Silettas at 4/- to 7/-.

Passionfruit.—Supplies were very light in the early part of the month and values jumped up to 20/- per box for choice lines, which were very scarce.

The high prices induced heavy consignments from Victoria, and with a poor demand prices came back rapidly and a fair proportion of the Passions from the southern State did not average 10/- per bushel. With normal supplies the market recovered and special fruit improved to 12/- per box.

Pears.—Supplies were good with a firm demand, and all varieties sold well with the exception of small sizes. These were difficult to move in the first half of the

month. With the improvement in prices for the better sizes, small fruit met with a stronger enquiry and prices hardened. Packhams were selling at 6/- to 10/-, W. Coles at 5/- to 9/-, and other varieties at 4/- to 7/-.

Persimmons were in heavy supply throughout the month. Demand was only fair and values continued low, ranging from 1/6 to 3/- per box.

Pineapples.—Arrivals were normal with a steady enquiry for choice fruit. Best sizes sold at 9/- to 11/-, with a few to 12/-, while large fruit ranged from 5/- to 8/- per case. A proportion of brands were affected with water blister and these could only be moved at reduced rates.

Quinces were in good supply with a steady demand at prices ranging from 4/- to 6/-, according to size.

Rock Melons were in moderate supply throughout the month. Demand was fair and prices showed little variation. California Cremes sold at 6/- to 8/-, few to 10/-, Honey Dews 6/- to 9/-, Cantaloupes 6/- to 8/-, per tropical case.—P. S. Macdermott.

New South Wales.

Sydney (24/4/33).—The Market Representative of the Fruitgrowers' Federation of N.S.W. reports:—Duke of Clarence (Tas.), 3/- to 5/-; Del. (N.S.W., Tas. and Vic.), 5/- to 11/-; Five Crown (N.S.W. and Tas.), 3/- to 6/-; French Crab (Tas.), 3/- to 6/-; G. Smith (N.S.W.), 5/- to 8/6; Geeveston Fanny (Tas.), 3/- to 5/6; Jon. (N.S.W., Vic. and Tas.), 6/- to 8/-; K.D. (Vic. and N.S.W.), 4/- to 6/-; Cleo. (N.S.W.), 3/- to 6/-; Rome (N.S.W.), 3/- to 7/-; Stayman (N.S.W.), 4/- to 7/-. Pears: B. de Cap. (N.S.W. and Tas.), 4/- to 6/-; B. Bosc (N.S.W., Vic., and Tas.), 4/- to 7/-; Keiffer (Tas.), 4/- to 6/-; Packham's T. (N.S.W.), 5/- to 9/-; W. Cole (N.S.W. and Tas.), 5/- to 9/-. Arrivals from Tasmania last week were 32,500 and from Victoria 3,500. Arrivals to-day total 34,000 from Tasmania and 5,000 from Victoria. These are both Apples and Pears, but principally Apples. There is a steady demand for Jon. and Del. in particular, and other varieties are selling satisfactorily considering the quantity of fruit available. Pears: The demand for this line has been firm, Packhams being preferred for the 1d. Pear and Caps and Coles of small size as the 3d. Pear. Williams are now practically finished. Bananas (Q'd and N.S.W.), 16/- to 26/-; small November bunches, 10/- to 12/-; Norfolk Island, 8/- to 16/-. Arrivals from Queensland last week total 850 cases; this week they were lighter, there being only 508 cases. A Norfolk Island shipment arrived early last week and comprised 12,000 cases; N.S.W. supplies have been lighter than usual, particularly in regard to large sizes. "November bunch" fruit is appearing in large quantities, in many instances the grading and markings on cases being misleading. Fruit below six inches in size should be marked "small." Custard Apples, Qld., 4/- to 6/- half-case; Lemons, green, 5/- to 7/-; N.S.W., partly colored, 5/- to 9/-; S.A., N.S.W., and Vic. colored, 8/- to 10/-; Grapefruit, N.S.W., 12/- to 14/-; White Siletta, 4/- to 7/-; Navels, N.S.W., 8/- to 10/-; Val., 6/- to 15/-; 2nd crop, 6/- to 9/-; Grapes (N.S.W.), Purple Cornichons, 3/- to 4/6 (few choice M.I.A.

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Fruit Commission Agent,
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"Chiltons."
City Fruit Markets, Sydney.

FRUITGROWERS!

For Satisfactory Results, Send Your Fruit to

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Municipal Markets, Sydney.

Shipping No. 83.

Established 1900.

BANANA GROWERS—For Top Market
Prices, Consign Your Fruit to**Hop Lee & Co. Ltd.**Licensed Farm Produce Agents,
8-9 Municipal Buildings,
Ultimo Road, Sydney, N.S.W.
Opposite City Fruit Markets.
Forwarding Number 25.**SUNNYSIDE ORCHARDS LTD.**Fruitgrowers and General Distributors
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to 5/-); Black Muscats, 3/- to 5/-; Ohanez, 3/- to 6/-; Dora. (M.I.A.), 2/6 to 3/-, few 4/-; White Muscats, 3/- to 5/-; Waltham Cross, 3/- to 5/-. Since Easter this fruit has been in fairly large supply, particularly Cornichons from the M.I.A. Peaches, 3/- to 4/-, few to 5/- half bush, 4/- to 8/- bush.; Plums, N.S.W., 3/- to 5/-; Pines, Q'ld., 5/- to 9/-, few 11/-; Passions, N.S.W., 5/- to 8/-; N.S.W., inferior, 2/- to 4/-, few extra special to 12/-; Vic., 6/- to 12/- bush; Persimmons, 1/- to 2/6, special to 3/-; Quinces, N.S.W. and Vic., 4/- to 5/- bush., special 6/-; S.A., 5/- to 7/-; Cantaloupes, 5/- to 7/-.

N.S.W. PEARS EXPORTED.

The s.s. Port Bowen sailed early in April from Sydney with over 23,000 cases of fruit, of which a considerable quantity was Pears.

Batlow.—Pears for the s.s. Port Bowen, which sailed early in April from Sydney, from the Batlow Packing House, were packed in the standard bushel case 18in. x 10½in. x 11½in. (inside measurements). Pears were pre-cooled before shipment; the varieties included B. Bosc, Packham, W. Cole, B. d'Anjou and Howell.



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Information furnished to the Australian Apple and Pear Export Council by the Director of Agriculture in Tasmania, Mr. F. E. Ward, reveals the attention given to careful handling of fruit from Tasmania.

The Tasmanian Apples and Pears Act of 1918 was amended to include the following:—That every person employed in handling, stacking, or loading fruit for export shall exercise proper care in so doing, in order to avoid causing injury to such fruit.

Regulations under this Act provide that no case or cases of Apples or Pears for export not stacked on end shall be stood or walked upon by any person, except upon a plank of not less than 1 inch in thickness and 6 inches in width first, placed on such case or cases for that purpose. Any person committing a breach of any regulation under "The Apples and Pears Act 1918" shall, upon conviction, be liable to a penalty not exceeding ten pounds.

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"The Fruit World," Box 1944
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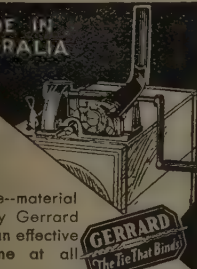
As a result of trials at Hawkesbury College, the Director of Plant Breeding, Department of Agriculture, N.S.W., is much impressed with the new wilt resistant Tomato, "Break of Day." The seed was planted in August, and although weather conditions were unfavorable, the plants have done well. The bush is small, about three feet across and bears heavily for its size. The fruit is large, smooth, free from blemishes, firm and a good color. Commercial growers are recommended to give this variety a trial.

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"WE STRIVE TO PLEASE"

Victoria.

Melbourne (29/4/33).—Prices quoted yesterday by the Wholesale Fruit Merchants' Association were:—Apples, per case, eating, 2/- to 3/-, special higher; cooking, 1/6 to 2/6. Bananas: Queensland, double case, green, 8's and 9's, 22/- to 23/-; 7's, 20/- to 21/-; 6's, 18/- to 19/-, rust affected fruit lower. Grapes, 3/- to 4/-. Lemons, per case, 6/- to 10/-. Custard Apples, Queensland, 5/- to 7/- half case. Passion Fruit, 5/- to 9/- case, few special higher. Peaches, per case, 2/- to 4/-. Pineapples, per double case, 6/- to 9/-; few best counts higher; very small lower. Pears, W.B.C., green, 4/- to 5/-, special to 6/-; others, 2/- to 3/-. Tomatoes, 3/- to 7/-, special higher, case. Val. Oranges, average, 7/- to 14/-; special higher; med. and inferior lower. Papaws, 12/- to 14/- double case. Queensland Grapefruit, 16/- to 18/- case; few good-colored higher.

The Melbourne market manager of the Federal Citrus Council of Australia reports that a few Valencias are arriving from late Vic. districts, but the quantity is very small compared with the corresponding period in previous years. It is expected that small parcels of new season's Navel Oranges and Grapefruit will arrive by the end of next week. Sales yesterday were as follow:—Vals., average standards, medium counts (140 up), 9/-; few, 10/-; large (75-84), slow, from 5/-; green lower; selected standards, large, from 5/- and 6/-; to best counts, 12/- and 13/-; specially selected, best counts, from 16/-. Lemons, average standards (180-248), 8/- and 9/-, specials 10/-; green and faulty lower.

A few Queensland Grapefruit are arriving and sell at 16/- to 18/-, medium counts; with a few special well colored higher; green and small, 2/- lower.

Shipments of Fresh Fruit to U.K. and Continent.

A statement to hand from the Victorian Department of Agriculture shows the estimated export of Apples and Pears for the 1933 season to April 14 as 1,019,000 cases. The total number of packages of Apples and Pears for the week ended April 14 was 233,977, the largest shipment (116,413) going on the Clan Urquhart to London, Liverpool and Glasgow. Other shipments were:—Mooltan, to London, 7,076 packages of Pears; Zealandic, to London and Hull, 32,405 packages Apples; Millais, to London, Liverpool and Glasgow, 29,153 packages of Apples and Pears; and Port Auckland, to London and Rotterdam, 42,303 packages of Apples.

Destinations are made up as follows:—London (661,040), Liverpool (129,228), Hull (102,221), Glasgow (37,021), Hamburg (42,477), Bremen (10,720), Rotterdam (14,315), with smaller quantities to Dunkirk, Antwerp and Oslo.

V.C.C.A. SELECTED AGENTS.

At the recent annual Conference of the Victorian Central Citrus Association, it was decided to appoint three additional accredited agents. The following have been appointed:—A. Millis & Sons Pty. Ltd., J. Davis Pty. Ltd., G. Woolf & Sons. The accredited agents previously on the list were as follows:—Herbert Wilson, I.F. & M. Coy., G. Lister Pty. Ltd., Tim Young & Co. Pty. Ltd., Frank Booth & Sons, H. Louey Pang & Co., and Producers' Co-op. Dist. Society Ltd.

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Marketing N.S.W. Bananas.

Under the system of having selected agents, the New South Wales Banana Growers' Federation has appointed the following to be their accredited agents in Victoria:—Silk Bros. Pty. Ltd. (No. 39), Golden Valley Fruit Co. Pty. Ltd. (No. 54), David Smith Pty. Ltd. (No. 40), Silbert, Sharp & Davies Pty. Ltd. (No. 53), A. Millis & Sons Pty. Ltd. (No. 30), J. G. Mumford (No. 31), Tim Young & Co. Pty. Ltd. (No. 49), Wing Young & Co. (No. 50), H. Louey Pang Pty. Ltd. (No. 36), H. L. E. Lovett & Co. (No. 28), Herbert Wilson Pty. Ltd. (No. 75).

TOO MANY PEAR PACKAGES.

On inspecting the loading of steamers at Melbourne with fruit for export, the uneven stacking of the Pears was only too apparent, there being nine different types of package.

How long will it be before one type of package will be adopted?

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and 243 Franklin Street,

Compulsory Marketing Illegal

Queensland Peanuts Test Case.

BY A MAJORITY of five votes to one, the Full High Court of Australia dismissed the appeal of the Queensland Peanut Board against the decision of Mr. Justice Webb, who in the Queensland Court some months ago decided that the setting up of a compulsory Marketing Board under legislation enacted in Queensland was invalid by reason of its infringement of section 92 of the Commonwealth Constitution.

This decision is of far-reaching importance, as all Marketing Boards established by State legislation have now lost their statutory authority. The issues involved in the appeal were of such importance that the States of Victoria, New South Wales, Queensland and South Australia were given leave to intervene.

The original action before Mr. Justice Webb arose out of the claim of the Peanut Board that 3,000 bags of Peanuts on the Rockhampton wharf were its property. This was denied by the Rockhampton Harbour Board. In deciding the case against the Board, Mr. Justice Webb held that the Peanuts had not been validly acquired by the Board, at the same time stating that his decision was based on the findings of the Privy Council.

When the appeal came before the High Court, the constitutional aspect was exhaustively dealt with by a strong bar. The Chief Justice (Sir Frank Gavan Duffy) and Mr. Justice Rich jointly agreed that the case was not one in which a State sought to acquire the total production of something that it required for itself and its citizens. It was interposing in the course of trade.

Mr. Justice Rich said the enactment controlled the commercial dealing in Peanuts by the grower and apart from section 92 would accomplish the complete destruction of his freedom in the commercial disposal of his products. The Peanut Board had no title to the Peanuts.

Mr. Justice Starke said the policy of the Queensland Act was doubtless to protect primary producers, but the compulsory marketing scheme adopted entirely restricted any freedom of action on the part of the producer. This power of acquisition contravened section 92 of the Constitution and was void.

Mr. Justice McTiernan said the Peanut Board was not validly constituted and could not assert any rights as owner of the Peanuts in dispute. The Queensland legislation operated to restrict trade and commerce, including interstate trade.

Mr. Justice Evatt, in a dissenting judgment, said the nature of the marketing scheme under legislation was to induce co-operation. The question was of far-reaching importance, because various schemes of compulsory pooling were now accepted throughout the Commonwealth. Further, if section 92 meant that these schemes could be no longer entered upon, so must it be. He did not think the infringement of section 92 was proved. The broad question was whether State Parliaments were by section 92 prevented from using compulsion in order to set up efficient selling agencies for pooled products. He did not think the State's action had been devised for the purpose of restricting interstate trade, or that it had had such an effect.

No Appeal to Privy Council.

Mr. Bulcock, Minister for Agriculture in Queensland, commenting on the High Court's decision, said that the Government would not take the appeal to the Privy Council. He would deprecate any steps taken to induce producers to abandon pooling. The system of organised mar-

keting was introduced into Queensland in 1922 and was the first of its kind in the world. Experience had shown that where producers had accepted organised marketing, they rarely reverted to the old system. The Committee of Direction of Fruit Marketing was a sound example of organised marketing which attended to the cultural as well as the marketing aspect. If growers voluntarily sent their produce to boards, the latter were entitled to dispose of it and the voluntary pool would apparently not be subject to the challenge of illegality.

Victorian Attorney-General's Opinion.

The Victorian State Attorney-General, Mr. R. G. Menzies, when interviewed, stated he was awaiting the full text of the judgment. However, the State Dried Fruits Board in Victoria was legally in a stronger position than other State boards as State legislation on dried fruits existed uniformly in the three States of Victoria, S. Aust., and N.S.W., and was reinforced by Commonwealth legislation. Growers must not hastily assume that the High Court's decision would affect the present control system.

FIJI BANANAS.

During April the view was expressed that on account of the heavy charges in Australia, the shipping of Bananas from Fiji to the Commonwealth might cease. Major Joske, who visited Australia to open up the trade, stated when recently interviewed in Suva that there were difficulties in competing with the Australian-grown Bananas. Although the duty had been reduced from 8/4 to 2/6 a cental under the Ottawa Agreement, there was a 10 per cent. primage and 6 per cent. sales tax, also income and unemployment tax on the alleged profits. After all these charges were paid there were only 3/- left out of every £1 for which Bananas were sold, which was subject to a further exchange of 1/-.

It has been suggested that Fiji might retaliate by levying a sales tax on Australian flour and other commodities.

However, at the end of April, a small quantity of Fijian Bananas reached Sydney and sold at from 28/- to 30/- per case, thus maintaining the trade on a moderate scale.

Mr. H. L. Anthony, General President of the N.S.W. Banana Growers' Federation, states because of public curiosity, high prices were at first paid for Fiji Bananas, but in comparison, the quality revealed that the locally-grown fruit could more than hold its own.

A FORMULA FOR WHITEWASH.

A whitewash suitable for many purposes on the farm can be made as follows (states the N.S.W. Department of Agriculture):—

Obtain, if possible, large pieces of fresh lump lime, place them in a very large bucket or other suitable container, and into this pour hot water. Cold water will do, but hot water is better, as it hastens the slaking. The lime will start to boil and break up. Keep it covered all the time with about half an inch of water. This is important, for if whilst the lime is slaking it is allowed to rise up above the water in a dry powder it will "curdle." Before the lime commences to boil fiercely, add tallow or common fat in the proportion of about 1 lb. to 14 lb. of lump lime. This makes a good binder which will prevent the wash from rubbing off. If desired, a little yellow ochre may also be added, which will give a cream or buff tint according to the quantity used. When the lime is thoroughly slaked it should be stirred and sufficient water added to make it a little heavier than, say, milk, after which it should be strained, and, if desired, may be applied whilst hot.

SPECIAL NOTICE TO FRUITGROWERS

All Members
under
Fidelity Bond

In response to numerous requests from growers for information as to who are members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA, the following list is given. All are members of the above Association, and are registered firms carrying on business in the

Wholesale Fruit Market, Melbourne

Stand numbers are as indicated in parentheses.

H. M. WADE & CO. (21).
T. STOTT & SONS (26).
H. L. E. LOVETT & CO. (23).
A. E. PITT (14).
J. DAVIS PTY. LTD. (8).
W. S. TONG (31).
SILK BROS. PTY. LTD. (24-25).
J. G. MUMFORD (35).
GOLDEN VALLEY FRUIT CO. PTY. LTD. (15).
W. SWEENEY PTY. LTD. (33).

J. W. ROSS (13).
J. H. YOUNG & CO. PTY. LTD. (32).
DAVID SMITH PTY. LTD. (3).
SILBERT, SHARP & DAVIES PTY. LTD. (17).
A. MILLIS & SONS PTY. LTD. (34).
W. A. WATKINS (5).
P. A. PATRIKEOS (36).
R. RENOF (22).
G. WOOLF & SONS (29-30).
F. CAVE & CO. PTY. LTD. (9).
R. CORNISH & SONS (5).
J. HYMAN & SON (51).

GROWERS PROTECT YOURSELVES by consigning to members of the WHOLESALE FRUIT MERCHANTS' ASSOCIATION OF VICTORIA.

Correspondence is invited by the Association.

J. D. FRASER, Secretary, 422-428 Collins St., Melbourne

MINERAL OILS FOR DORMANT SPRAYING.

MINERAL OILS FOR SPRAYING have been closely investigated in U.S.A. Members of the Western Co-operative Oil Spray Project, comprising the experimental stations of Idaho, Montana, Oregon, Washington and British Columbia and the U.S. Department of Agriculture, met at Seattle on December 3 and 4 and made suggestions, based on experimental work for the past six years, regarding the use of oil sprays on fruit trees on the N.W. Pacific Coast of U.S.A. The full report is published in "Better Fruit." The following extract dealing with dormant sprays will be found of interest.

1. Mineral oil sprays have been found to be effective in the control of such insects as the San Jose scale, European red mite, brown mite, aphids, tree hoppers, and the fruit tree leaf-roller.

2. Lime sulphur is effective in the control of the San Jose scale, blister mite, rust mite, Peach-twigg borer, two-spotted mite, oystershell scale, and also California Peach blight, and Peach-leaf curl.

3. For dormant applications the oil should be used at not less than 3.2 per cent. actual oil (ordinarily four gallons of commercial emulsion or five gallons of home-made emulsion per 100 gallons), and the lime sulphur at not less than a 4 deg. Baume test. This is equivalent to a 1/12 dilution of 32 deg. Baume lime sulphur. Five pounds of dissolved dry lime sulphur are equivalent, chemically, to about one gallon of 32 deg. lime sulphur. Straight-out oils of 100 to 120 viscosity and relatively low sulphonation test (50-70) can be safely used.

4. Whether oil emulsion or lime sulphur is used as a dormant application depends on the insects or fungus diseases to be controlled.

5. Oil emulsion or lime sulphur should generally be applied in the spring, preferably before the bud scale separate and before the bud tips show green.

6. Injury may result if quick-breaking emulsions are applied during the critical period of bud development. This period occurs between the time the buds first show green and the cluster bud stage.

7. Where it has been necessary to use oil at a later period, a miscible oil or its equivalent in stability has not ordinarily caused injury, when properly mixed and diluted to spray strength. The term "miscible oil" is applied to those emulsions in which the emulsifier is soluble in the oil.

8. Miscible oil should be diluted to spray strength by placing the oil in the tank first, and with the agitator running adding the water slowly at first, until a paste is formed, after which the tank can be filled with water in the ordinary manner. In no case should the miscible oil be added to the water. Hard water, when used with miscible oil, may cause a breaking of the emulsion which will result in injury to the trees.

9. There is no evidence that low temperature following sprays applied as suggested will result in injury.

10. Severe injury to Delicious buds may result if lime sulphur is applied as a delayed dormant spray.

Prepare for Asparagus Planting.

June is a good month for the planting out of Asparagus roots, and to ensure that good crops of this delightful vegetable are to be obtained it is necessary to prepare the ground during this month.

Commence by trenching the ground well to a depth of at least two feet. The deeper the trench is dug the better. As Asparagus does best in open ground, any old garden refuse (even old tins) can be placed at the bottom of the trenches, on top of which place a good layer of well rotted stable manure, but be sure to fill in with fifteen inches of good rich soil.

AUSTRALASIAN FRUIT SALES.

In a cable on April 19, from London, Apples in the London market met with a good demand. The Otranto's Tas. Ribstons brought 7/- to 10/6 a case; C.O.P., 8/6 to 11/6; Alf., 8/6 to 10/6; Worcesters, 8/6 to 11/3; Alex., 7/6 to 8/6; Cleos., 9/3 to 11/3; Jons., 9/3 to 9/9; N.S.W. Dunn's, 8/6 to 10/-; London Pippins, 8/- to 9/9; C.O.P., 8/6 to 9/9; Jons., 9/9 to 12/6; S. Aust., Cleos., 9/- to 11/3; West Aust. Jons., 9/3 to 12/-; Dunn's, 9/6; Vic. Jons., 8/6 to 11/9; K. David, 10/3 to 10/6.

The Port Victor's N.Z. Cox's realised 8/- to 16/6; Jons., 9/- to 14/9; Dunn's, 9/- to 10/9; Del., 10/3 to 14/6; and London Pippins, 9/6 to 10/9. Pears were sold as follows:—Otranto's N.S.W. Packham's, 12/- to 14/3 a box; Howell's, 10/- to 10/3; Winter Cole, 10/- to 11/9. The Turakina and Otranto's Vic. Packhams, 10/- to 15/3; B. Bosc, 11/3 to 16/3; Howell, 8/9 to 11/3; Comice, 14/3 to 18/-; Turakina W.A. Jos., 8/3 to 8/9 a half-box; Keifers, 5/9; Lelectier, 5/- to 5/6 half-box.

London (26/4/33).—Apples in good demand. The Maloja's and Port Huon's Tas. Apples sold as follow:—Ribstons, 10/- to 11/6 a case; Cleos., 10/- to 12/6; Worcesters, 10/- to 12/6; Cox's, 11/- to 15/- and a few to 17/-; Jon., 10/- to 13/-; Wellingtons, 9/- to 10/-; Alf., 10/- to 11/6; Dunns, 11/6 to 12/-. N.S.W. Cleo., 11/- to 11/6; Jons., 11/- to 12/3; King David, 11/6 to 12/3; Londons, 10/- to 11/6; G.S., 14/- to 14/9; Del., 11/- to 11/6. The Rangitiki's N.Z. Cox's brought 12/- to 16/6; Dunns, 11/- to 12/3; Jons., 10/- to 14/-; and Ballarats, 10/- to 11/6.

W.A. Pears, Howells, 9/- to 10/- a case; W.N., 6/- to 7/6 a half-case; Jos., 6/6 to 7/6; Packham, 6/6 to 7/6 a half-case; Tas. Comice, 8/- to 10/- a tray; S. Aust. B. Boscs, 11/- to 13/- a three-quarter case; Vicars, 8/-; Clairgeau, 9/-; Packham, 12/- to 13/- a three-quarter case; N.Z. B. Boscs, 14/- to 16/- a box; Jos., 12/- to 14/6; Winter Cole, 10/6 to 11/9 a box; B. Boscs, 5/6 to 6/6 a half-box; and W. Cole, 3/6 to 4/3 a half-box.

Major H. Dakin, Sydney, Australian agent for Geo. Monro Ltd., advises that his firm had cabled on April 10 as follows:—

"'Ballarat,' 'Jervis Bay,' 'City of Glasgow,' most varieties of Apples showing bitter pit, particularly Cox's. Demand fair at moderate prices. Cox's, 8/- to 20/-; Alfristons, Reinnettes, Duke of Clarence, 8/6 to 10/-; Jonsthans, short of color, 10/- to 12/-; Dunns, Shorland Queen, Ribstones, Gravensteins, 9/- to 10/-; King David, 9/6 to 10/6; Worcesters, 10/- to 11/-; Cleos., 11/- to 12/6. Pears good conditions, cases, Howells, 10/6 to 11/-."

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Messrs. Parnham Pty. Ltd., Queen-street, Melbourne, advise having received the following cables from the "White Service," April 6—"Jervis Bay," "Ballarat," "City of Glasgow"—

"Part cargo offered; good demand. Jon., 8/- to 11/6; Dunns and Cleos., 8/- to 10/-; B. Bosc Pears, 13/- to 15/6; Packhams, 13/- to 14/-; Howells, 8/6 to 10/6; Anjou, 14/- to 15/9."

A further cable, dated April 13, advises that the remainder of the "Jervis Bay" and "Ballarat" fruit was sold at the following prices:—

"Jon., 8/- to 11/-; Dunns, 7/9 to 9/-; Cleos., 8/3 to 11/6. Pears shipped in the steamer "Mongolia" were in good demand. Packhams, 13/- to 13/9; Howells, 8/3 to 9/9; Williams, 15/9 to 17/-."

AN OLD-ESTABLISHED NURSERY.

ESTABLISHED SOME 42 YEARS AGO by Messrs. Charles and George Griffith, the business of Two Bays Nurseries & Orchard Co. Pty. Ltd., is known all over the world. In 1912 Messrs. Griffith Bros. formed the business into a company, and since that date it has been known as the Two Bays Nurseries & Orchard Co. Pty. Ltd. Mr. George Griffith retired from the business through death on March 29, 1917. The management of the nursery and orchard portion of the business was then taken over by his son, Mr. C. M. Griffith, whose sad death through accident in December, 1931, was a severe loss to the nursery and fruit industries. Mr. Charles Griffith, who had been in retirement in America for some years, returned in 1932 to take over control of the business.

At the present time 100 acres are devoted to nursery stock and 400 acres to the growing of Apples and Pears. The firm's stock of Apples at the present time comprises mainly commercial varieties, such as Granny Smiths, Jonathans, Delicious, Democrat, Munroe's, Five Crown, Cleos., Yates, Rokewood, Glengyle Red, Stayman Wine-sap, etc.

In Pears, the varieties which are grown in biggest quantities include Williams, Packham's Triumph, Beurre Bosc, Broom Park, Josephines, Winter Nelis, etc.

Peaches, for which there has been a big demand during the past season, are grown in large quantities. There is likely to be a shortage of the best canning varieties owing to the difficulty in building up stocks during the last two years. Clingstone canning varieties are those for which there is the biggest demand, including Pullar's Cling, Phillips, Thielie's Cling, Levis, Sims, Healesville, Golden Queen. Cherries, grown on Mazzard and Kentish stocks, include about twenty varieties suitable for the early mid-season, late and very late seasons.

Plums, Prunes, Nectarines and other fruits are also grown in large quantities, and a particularly fine stock of flowering trees, including:—Apples, Crab and flowering in twelve varieties; Apricots, double deep pink; Cherries in pink, deep pink, lilac and white; Japanese Plums, single and double. Plums which carry choice flowers and foliage include "Bleriana," "Moseri"; Plums with purple foliage, Nigra, Pissardii, Vesuvius, Vesuvius purpurea; dwarf varieties are represented by Sinensis alba, Sinensis rosea, Sinensis Triloba, etc.

400 Acres of Orchard.

A recent visit to the Two Bays Orchard revealed excellent development in the growth of the trees. Three hundred acres are planted to Apples, mainly export varieties, and one hundred acres to export varieties of Pears.

Three tractors are used for cultivation. The extensive cool store is working to full capacity.

WESTERN AUSTRALIA.

Up to April 17, there had been exported from Western Australia 318,792 cases of Apples and 36,131 cases of Pears. The quality of the fruit is excellent. The export quantity was reduced because of a heat wave in February, which caused sunburn, particularly among the Jonathans; other varieties scorched were Cleos., Granny Smith and Dunns. However, growers have been particular to see that only high quality fruit is shipped overseas.

Mr. G. W. Wickens, Superintendent of Horticulture, points out in the Western Australian "Journal of Agriculture" that growers must pay particular attention in regard to San Jose scale. This pest, states Mr. Wickens, is not a very difficult one to control and does not do as much damage in W.A. as red mite—Bryobia; nevertheless, other countries are taking drastic steps to prevent the introduction of San Jose scale. No fruit infested with this pest will be passed for shipment, and if the infestation is at all severe the whole line will be rejected.

Because of the number of trees affected with Chlorosis, the Department has arranged to conduct experiments to discover control measures.

During the stone fruit season just past, fruit fly was more in evidence than last year, while Rutherglen bug appeared in plague form and took heavy toll of the crop. Fortunately, the plague visitations are rare. Growers are urged to continue measures for fruit fly control through baiting, trapping and the destruction of all infested fruit. Although this entails a lot of labor, the results are worth while.

UTILISING AUSTRALIAN TIMBERS.

Much valuable investigational work in connection with the use of Australian timbers is being conducted by the Commonwealth Council for Scientific and Industrial Research (Forest Products Division), under the capable leadership of Mr. I. H. Boas.

The following trade circulars have been issued:—(1) Sound Practice in the Air Seasoning of Boards; (2) The Testing of Timber for Moisture Content; (3) The Growth

and Structure of Wood; (4) The Functions of the Division of Forest Products (out of print); (5) Vacuum Kilns (out of print); (6) Wood Borers in Australia: Part I.—Lyctus, or the Powder Post Beetle; (7) Sample Boards: Their Use in Timber Seasoning; (8) Identifying Australian Timbers. The Value of Structure, Composition, and Precise Names; (9) Electrical Moisture Meters: For Measuring the Moisture Content of Timber; (10) The Principles of Wooden Box Construction; (11) Wood Borers in Australia, Part 2—Anobium, or the Furniture Borer; (12) Combined Air and Kiln Seasoning.

Queensland.

Brisbane (26/4/33).—Bananas, Cavendish, best 14/6 to 19/- case, other grades 6/- to 13/6 case; Pineapples, smooth leaf 18/- case, best 7/- to 10/- case, 24 to 36 in case 3/- to 6/-; Ripleys, 5/- to 9/- case; Papaws, Yarrowun, 5/- to 10/- pine case, bushel case 5/- to 7/-; Gualda, 5/- to 7/-; local Papaws, 4/6 to 6/- dump case; local Navel Oranges, 10/- to 14/- bush. case; Oranges, 6/- to 10/- bush. case; local Lemons, 3/- to 5/- half-case; Grapefruit, 4/- to 6/- case; Passion Fruit, first grade 10/- to 13/- case, second grade 4/6 to 7/6; southern Lemons, 13/- to 14/-; Persimmons, 1/- to 2/6 case; Q'ld. Apples, Jon. 6/- to 7/6, G. Smith 6/- to 7/6, D.M. 5/- to 6/-, Del. 4/- to 7/6 case, Winesaps 5/- to 6/-, Demo. 5/- to 6/-; Lemons, Benyenda, 13/- to 16/- bush. case; Cust. Apples, 2/6 to 3/6 case, special 4/-; Grapes from Stanthorpe, Muscatels, black 6/- to 10/- case, white 5/- to 8/-; Waltham Cross, 7/- to 10/-; G.G., 3/6 to 6/-; Ascots, 2/6 to 4/6; Black Prince, 3/- to 6/-; P.C., 8/- to 11/- case; Baraeasso, 5/-; Benyenda Navel Oranges, 12/- to 15/- bush. case. Very few Pears from Stanthorpe were about, and the following prices ruled:—P.T., 7/- to 8/-; Tas. Apples, T.P., 7/- to 7/6 case; D.C., 6/- to 7/-; Aro, 6/- to 7/-; Jons., 7/- to 7/6, few 8/- case; Pears from Tas., W.C., 6/6 to 10/6 case; C.S., 7/- to 9/-; B.C., 7/- to 8/-. A few Victorian Apples were on the market, and Jons. sold from 6/6 to 8/- case. For Persimmons from N.S.W., from 5/- to 6/- case ruled; local Mandarins, green, 4/- to 5/- half-case; S.A. Quinces, 6/- bush. case.

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Queensland

CUSTARD APPLES will be ripening more slowly as the nights get colder. If the weather becomes unduly cold, or if immature fruit is sent south (writes the "Queensland Agricultural Journal"), the fruit is apt to turn black and be of no value. This can easily be overcome by subjecting the fruit to artificial heat, as is done in the case of Bananas, during the cooler part of the year, when it will ripen properly and develop its flavor. Grade Custard Apples carefully and pack in cases holding a single layer of fruit only for the southern markets.

Pineapples, when at all likely to be injured by frost, should be protected by a thin covering of bush, hay or similar material. The plantation should be kept well worked and free from weeds, and slow-acting manure, such as bonedust or island phosphates, can be applied now. Lime can also be supplied when necessary. The fruit takes longer to mature at this time of the year, consequently it can be allowed to remain on the plant till partly colored before gathering for the southern markets, or can be fully colored for local use.

Banana plantations must be worked and free from weeds, especially if the weather is dry, as a severe check to the plants now means small fruit later on. Bananas should be allowed to become full before the fruit is cut, as they will carry all right at this time of the year; in

fact, there is more danger of their being injured by cold when passing through New England by train than there is of their ripening up too quickly.

Land intended for planting with Bananas or Pineapples during the spring should be got ready now.

Strawberries require constant attention, and, unless there is a regular and abundant rainfall, they should be watered regularly. In fact, in normal seasons an adequate supply of water is essential, as the plants soon suffer from dry weather or strong, cold westerly winds.

Where not already done, vineyards should be cleaned up ready for pruning—it is, however, too early to prune or to plant out new vineyards.

AUSTRALIAN NUT ASSOCIATION.

A meeting of the Australian Nut Association was held at the Show Grounds, Sydney, during the Royal Show, Mr. H. J. Rumsey presiding. The conference was quite successful, there being a number of good papers read before the meeting. The afternoon session was particularly devoted to Tung-Oil Nut growing. The Hon. Secretary of the Association is Miss A. Stevens, 22 O'Connell-street, West End, South Brisbane, Queensland.

We were recently told of the sad case of a Scotchman who became engaged to a girl who got so fat he wanted to break off the engagement. But the girl couldn't get the ring off, so he had to marry her.

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George Street, Brisbane,
Queensland.

HORTICULTURAL EDUCATION ASSOCIATION'S YEAR BOOK.

The first year book of the Horticultural Education Association deals with the scientific progress of horticultural research, and is of considerable interest. Contributors to this new annual publication include leading men in the realm of horticultural research and education. Included among the many excellent articles are the following:—"Some Recent Developments in Relation to Glasshouse Crops" (by Dr. W. F. Bewley); Mr. D. Boyes, M.A., Director of Cambridge Horticultural Research Station, describes the work carried out in the breeding of vegetables, the most important crops at present under investigation being Brussels Sprouts, Broccoli, Cabbage, Cauliflower, Beans (for canning), Celery, Gherkins, Lettuce, Onions (including silverskins for pickling), Parsnips, Peas (both market garden and canning), and Strawberries.

Mr. C. H. Oldham, N.D.H., an inspector of the Ministry of Agriculture, gives an account of the Cauliflower industry of Brittany, and Mr. R. S. Thomson, B.Sc., Horticulturist to the States of the Island of Jersey, tells of the cultivation of early Potatoes in Jersey. "Investigations on Vegetable Diseases in the Bristol Province" is the title of an article by Mr. Lawrence Ogilvie, M.A., M.Sc., of the Long Ashton Research Station, while other articles are:—Surveys of the position of the horticultural industry in Cornwall and Hertfordshire, by Mr. H. W. Abbiss, D.C.M., M.M. (Horticultural Superintendent), and Mr. C. E. Hudson (Hertfordshire Institute of Agriculture, St. Albans) respectively. "The Effect of Orchard Factors on the Storage Qualities of Fruits" (Dr. T. Wallace, M.C., A.I.C., Deputy Director of the Long Ashton Research Station); "The Present Uses and Future Development of Spray Spreaders" (Mr. Hubert Martin, M.Sc., Sth. Eastern Agricultural College, Wye); "New Insecticides and Possible Insecticide-fungicide Combinations" (Messrs. M. D. Austin, S. G. Jary and H. Martin, also members of the staff of the Wye Agricultural College), also Horticulturists and Public Landscape Architecture, by Mr. Walter P. Wright.

This is altogether a valuable publication, the hon. editor being Mr. R. T. Pearl, B.Sc., A.R.C.S., D.I.C., South-Eastern Agricultural College, Wye, Kent. The price is 3/6 post free.

An Important Postmark.

Counsel for defence rose and pointed his finger at the man in the witness box. "Now, sir," he commenced, "the whole evidence hangs on the destroyed letter. Think before you answer. What did the postmark say?"

"I remember," he said, after pondering, "the postmark said: 'Eat more fruit!'"

COMMERCIAL INQUIRIES.

THE following commercial inquiries have been received by the Department of Commerce. No responsibility is accepted as to the standing of inquirers, with whom firms interested are requested to communicate direct. References accompany those inquiries marked (a), and interested firms will be supplied, in confidence, with information as to the general standing of inquirers on application to the Department of Commerce, A.M.P. Chambers, Collins-street, Melbourne.

(a) Messrs. E. J. Parrott, 18 Beer-lane, London, E.C.3, desire to get in touch with Australian exporters of canned fruits and honey. They state that they represent in London a number of European and Scandinavian houses.

(a) Messrs. D. & W. Murray Ltd., 28 Finsbury-street, London, E.C.2, are anxious to get in touch with Australian exporters of wheat and mill offals, canned, dried and fresh fruits, canned meat, honey and eggs.

(a) Messrs. James Webster & Bros. Ltd., timber importers, Webster House, Derby-road, Bootle, Liverpool, desire to secure direct supplies of Australian timbers.

(a) The Eastern Canada Trading Co. Ltd., 417 St. Peter-street, Montreal, Quebec, desire to secure agencies in foodstuffs, woodenware and machinery.

Messrs. Spinners' Ltd., P.O. Box 534, Haifa, Palestine, desire to get in touch with Australian exporters of canned Peaches, Pears and Apricots.

Messrs. Meyers, Walsh & Co., Dominion Bank, King and Yonge streets, Toronto, Canada, are anxious to secure agencies in food lines.

Messrs. J. R. Riseley & Co., of Fife-street, Bulawayo, Southern Rhodesia, desire to get in touch with Australian exporters of canned fruits and canned meats.

FRUIT FOR CANADA.

The Waihemo, taking the first of the new season's dried fruits, sailed from Melbourne for Vancouver on April 18. She carried 7,565 cases of dried fruit, 1,430 cases of canned fruit, also 350 bales of wool. The Canadian Highlander also took 17,000 cases of dried fruit for Montreal. Her cargo also included 4,000 cases of Pears, skins, hides, casing and other products.

Recently there has been an increased demand for Australian timbers on the English market, owing to the fostering of the Empire spirit and the improvement in marketing adopted by the Australian timber industry.

Australian timbers are being used to a greater extent in U.S.A. The timbers include Maple, Walnut, Black Bean, Hoop Pine, Mountain Ash, Silky Oak, Blackwood, Jarrah and Karri.

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Harcourt Fruit Supply Co. Ltd.
Victorian Central Citrus Assn. Ltd.

Tasmania: State Fruit Advisory Board.
New South Wales: N.S.W. Central Citrus Assn. Ltd.
Batlow Packing House Co-op. Soc. Ltd.